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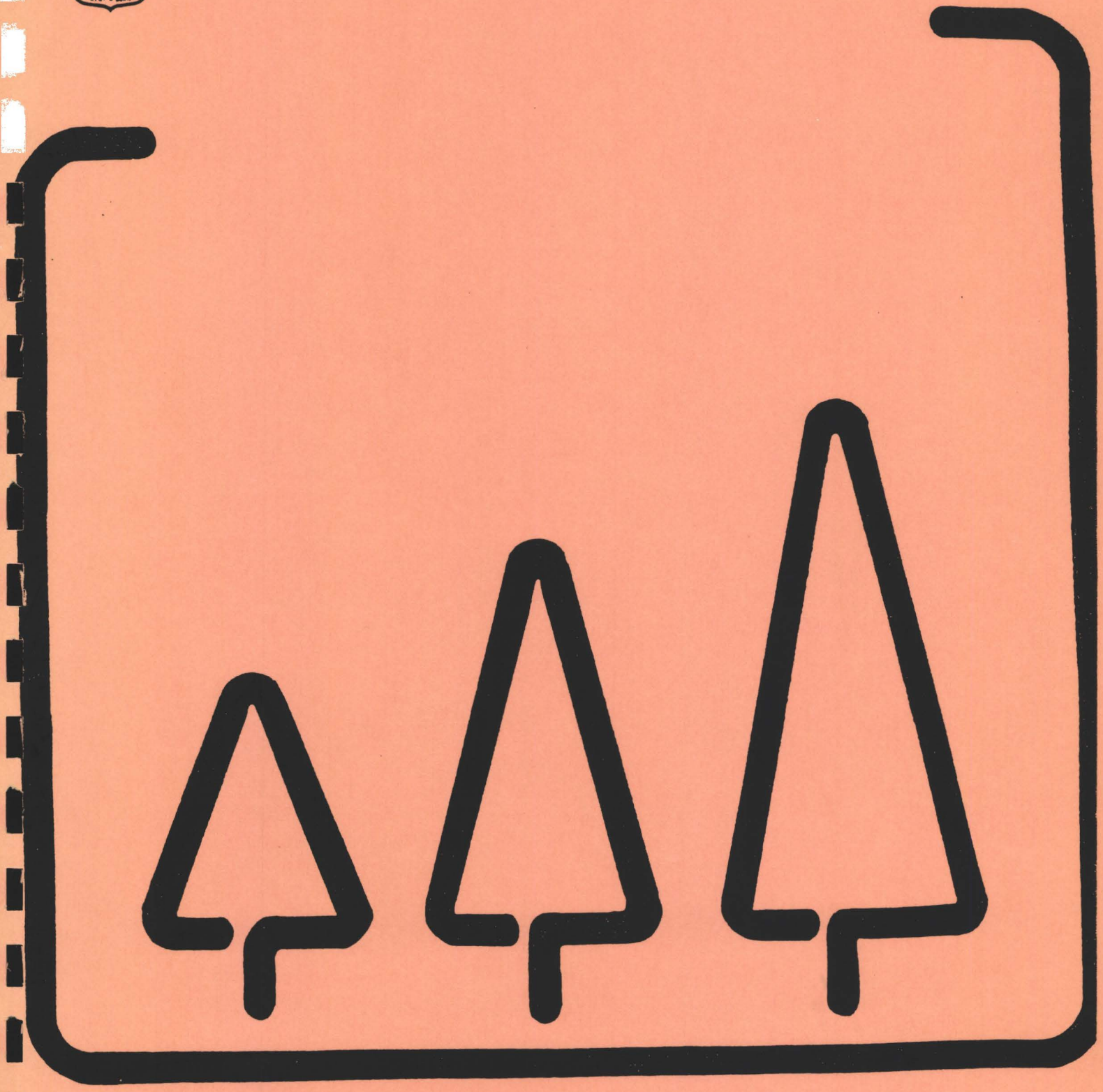
Forest Service

IDAHO TIMBER SUPPLY ISSUES



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IDAHO TIMBER SUPPLY ISSUES

August 2, 1991

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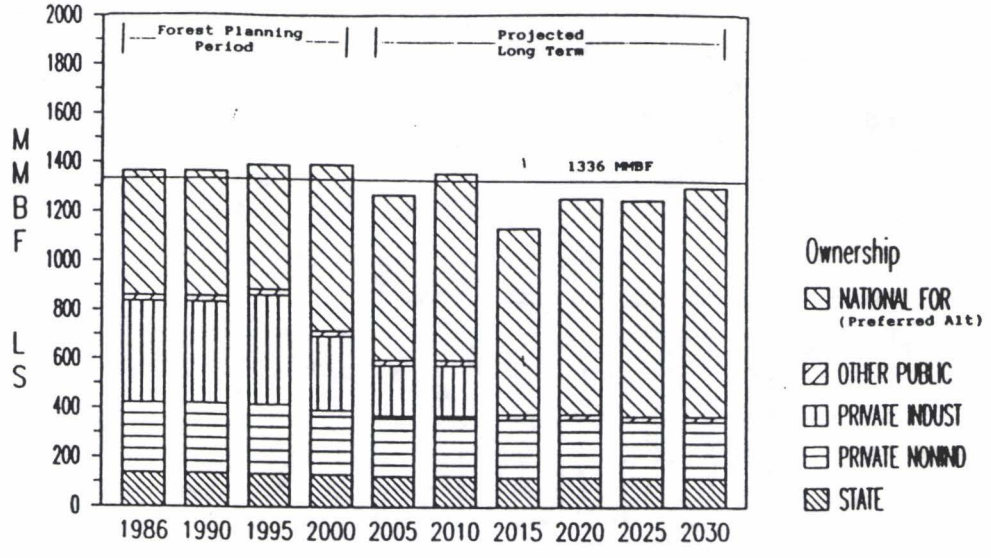
EXECUTIVE SUMMARY

IDAHO TIMBER SUPPLY ISSUES

In 1987, timber supply potentials were described in "A Report on Idaho's Timber Supply". At that time, only one National Forest in the State of Idaho had an Allowable Sale Quantity (ASQ) based on a final Forest plan. ASQ projections were made for the remaining 9 Forests. Now, all National Forests within the State of Idaho have final Forest plans and ASQ's. This paper re-examines the "Report on Idaho's Timber Supply." However, it also goes beyond just examining ASQ levels. Monitoring of Forest plans has revealed that timber volumes actually sold and harvested are much less than the projected ASQ levels. This paper attempts to address some of the major issues that are creating this situation on the National Forests within the State of Idaho.

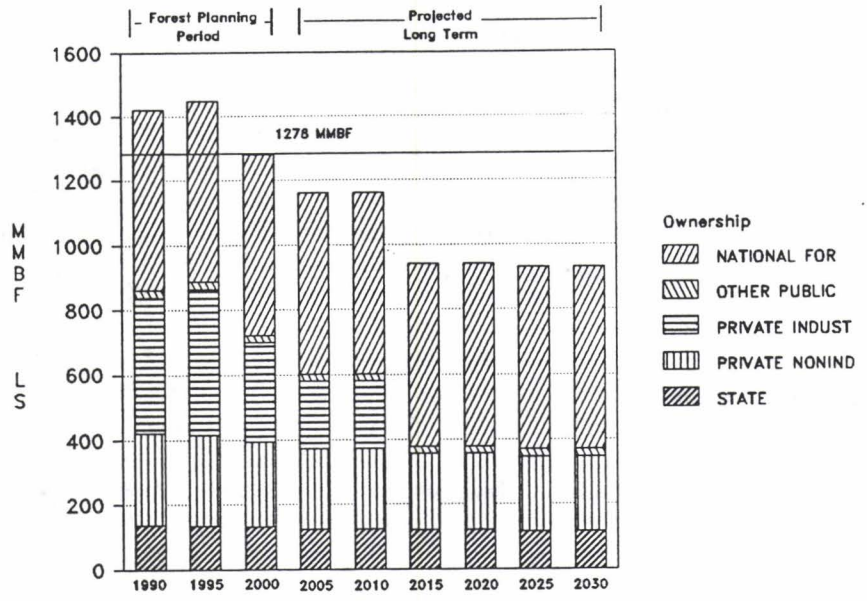
1987 vs. 1991 Findings and Conclusions

1987 Findings -- Northern Idaho -- Predictions made in the earlier (1987) timber supply study showed that, although Northern Idaho might have some minor supply problems in the future, overall timber supply levels appeared to meet most needs. It was noted that harvest levels cannot be maintained from private industrial lands beyond 10 years, however, it was estimated that these reductions in private harvest could be replaced with National Forest volume as predicted in Forest plans at that time. The graph below illustrates the 1987 findings for Northern Idaho.

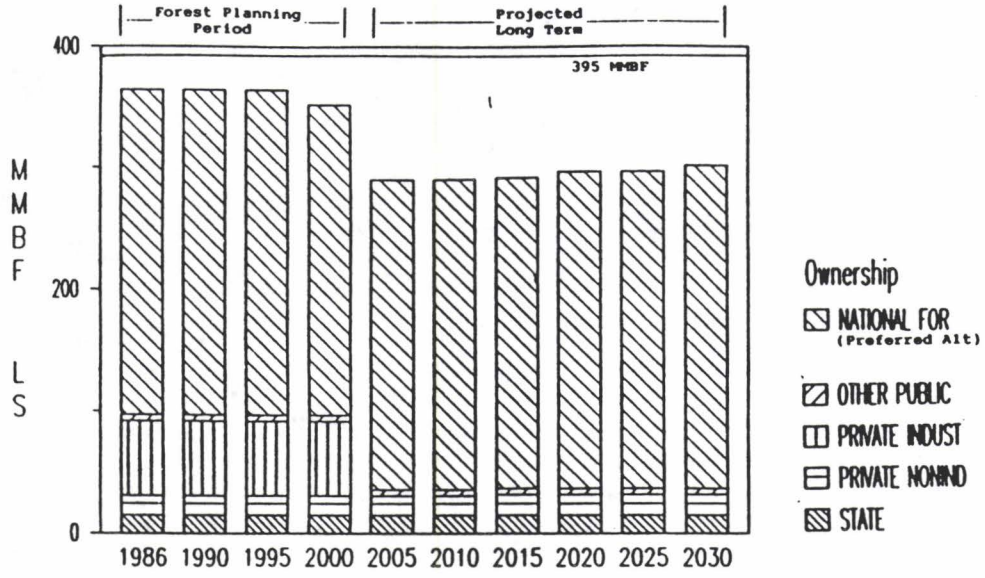


1991 Findings -- Northern Idaho -- Given the many issues now facing the National Forests, earlier predictions appear inordinately optimistic. Existing issues are affecting the National Forests' ability to sell timber at ASQ levels. Previously projected increases in timber sale levels no longer appear realistic. In depicting the scenario that harvest levels can be sustained over time (with no increases in the future), large short-falls in timber supply are expected as early as the year 2005, with even more significant drops in the

year 2015. **The Northern Idaho marketing area is the most significantly impacted in the State.** The graph below illustrates the 1991 findings for Northern Idaho. It should be noted that even this graphic depiction is believed to be an overly optimistic prediction in terms of volume levels from the National Forests.



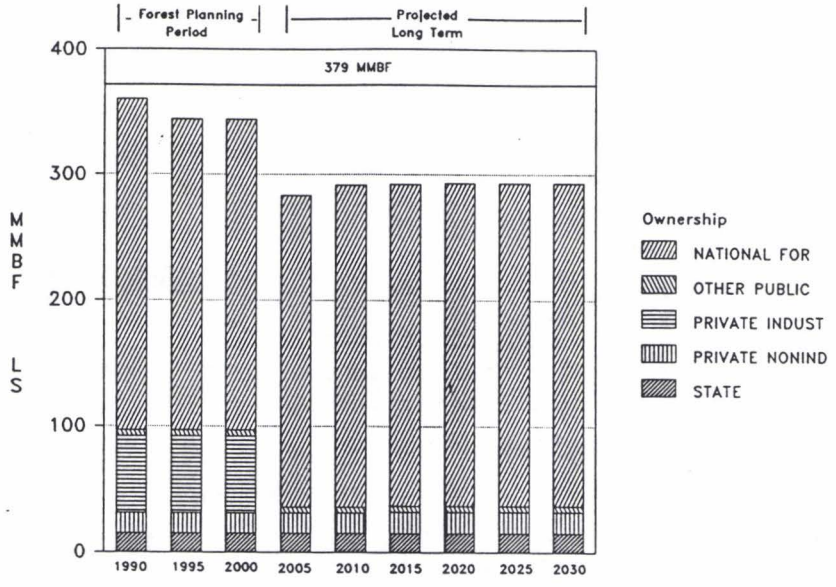
1987 Findings -- Southern Idaho -- Predictions made in the earlier (1987) timber supply study showed some supply problems in the future would occur, predominately in Southwestern Idaho. Current average harvest levels on private industrial lands could not be maintained beyond 15 years. It was estimated that although National Forest harvest comprised about 75 percent of the total harvest in the area, they could not offset the falldown from private lands. the graph below illustrates the 1987 findings for Southern Idaho.



1991 Findings -- Southern Idaho -- Similar to that of Northern Idaho, given the many issues now facing the National Forest, earlier predictions appear to have been optimistic. However, the supply issues identified in 1987 for Southwestern Idaho do not appear to be as severe when compared to Northern or Southeastern Idaho. The Payette and Boise National Forests have taken actions to respond to the supply issues identified in the earlier study. Predictions made in the 1987 study are still considered to be valid, although the Forests within this marketing zone face many challenges in dealing with the current issues and meeting their expected ASQ levels. **The Southwestern Idaho marketing area is expected to be the most minimally impacted in the State.**

For Southeastern Idaho, large reductions in timber harvest levels are expected on the Targhee National Forest in particular. The basic premise of the predictions made in the earlier study are still considered to be valid, however, the reductions expected on the Targhee National Forest are anticipated to be larger in scale than anticipated earlier. The timing of the reductions is also occurring at a faster rate than previously expected. In addition, the other National Forests within this marketing zone face many challenges in dealing with the current issues and meeting their expected ASQ levels. **The Southeastern Idaho marketing area is expected to be much more impacted than originally predicted.**

The graph below illustrates the 1991 findings for Southern Idaho. It should again be noted that even this graphic depiction is believed to be an overly optimistic prediction in terms of volume levels from the National Forests.



Although the above findings and conclusions are significant in terms of their impacts to future timber supply levels within the State of Idaho, the authors of this report do not want to imply that this equates to inappropriate management of National Forests. The actions that are currently being taken by the Forest Service, and the actions that may potentially take place in the future by the Forest Service, which result in reduced harvest levels may be appropriate and proper management of the National Forests.

In evaluating the timber supply situation within the State of Idaho, and taking into account the major issues that are guiding National Forest management, major supply problems are anticipated in the near or immediate future.

Revisiting "A Report on Idaho's Timber Supply" -- Not a Complete Picture

The methodology or process used in the 1987 timber supply study only evaluated National Forest timber supply from the perspective of full accomplishment of ASQ. ASQ is an estimate of the maximum volume a Forest can provide for the first decade of the planning period. **There can be significant gaps between the amount of volume that is estimated or projected, and the amount of volume that is actually supplied to timber purchasers. Therefore, evaluating National Forest timber supply by solely looking at ASQ does not provide a complete picture of the actual situation.**

In using the same methodology from the 1987 report, the findings for Northern Idaho are somewhat different from those of the earlier timber supply study. Timber supply levels appear to be adequate up to the year 2015. At this point, a slight short-fall in timber supply is predicted. From the year 2020 to the end of the planning horizon, the short-fall no longer exists. When no short-fall is predicted, substantial amounts of surplus volume are expected. The findings for Southern Idaho are somewhat different than those of the earlier timber supply study. Timber supply levels appear to be adequate up to the year 2000. The projected volume in the year 2000 nearly meets projected needs. A short-fall is predicted over the long-term. This is due to the dramatic drop-off in volume from private industrial lands. It should be noted, however, that the short-fall has lessened to some degree.

However, this analysis only evaluates timber supply from the perspective of full accomplishment of ASQ and does not provide a complete picture of the actual National Forest timber supply situation.

Comparing ASQ with Actual Volume Offered, Sold, Harvested and Under Contract

As pointed out earlier, ASQ is an estimate of the maximum volume a Forest can provide for the first decade of the planning period. There can be significant gaps between the amount of volume that is estimated or projected, and the amount of volume that is actually supplied to timber purchasers.

ASQ is usually tied to the amount of volume sold from a given Forest. The amount of volume sold is typically either equal to or less that the volume offered from a Forest. The amount of volume harvested depends upon the desires of the individual timber purchasers in that they typically have up to 3 years to harvest the volume after purchase.

A State level summary indicates that volume offered for sale is 98 percent of ASQ, timber sold is 87 percent of ASQ, volume harvested is 84 percent of ASQ and volume under contract is 277 percent (2.77 times) of ASQ. Regional variation does exist. Of most concern is the recent drop in volume under contract in the southeast (61 percent of ASQ in 1989).

In evaluating Northern Idaho, the average amount of volume harvested is 78 percent of the total ASQ. Therefore, the short-falls in supply (predicted above) are exacerbated by this situation. If this gap between the amount of volume actually harvested and the ASQ continues, **an additional 125 MMBF per year will not be available to local timber purchasers in Northern Idaho.**

The situation is not as prevalent in Southern Idaho. In evaluating Southern Idaho, the average amount of volume harvested is 97 percent of the total ASQ. Therefore, the short-falls in supply (predicted above) are only slightly exacerbated by this situation. If this gap between the average amount of volume actually harvested and the ASQ continues, **an additional 8 MMBF per year will not be available to local timber purchasers in Southern Idaho.**

Several issues concerning the overall management of the National Forests are currently influencing the levels of timber actually harvested on the Forest. Many of these issues have the potential to even further impact National Forest timber harvest levels in the future.

Issues Affecting National Forest Timber Supply Within the State of Idaho

Many issues relative to managing the National Forests either are or have the potential to impact timber supply. **Individually these issues may not be significant, however, when evaluated cumulatively they could have significant impacts to timber harvest levels from the National Forests.**

Several issues were examined that are impacting National Forest timber offer, sell and harvest levels. They are:

-- **Non-Interchangeable Components** -- The non-interchangeable components (NIC's) of ASQ could potentially affect about 40 MMBF per year within the State of Idaho. Non-interchangeable components are portions of the ASQ that can not be interchanged or mixed with other portions of the ASQ. For example, if 60% of an ASQ of 1000 MMBF in Ponderosa Pine type, then the maximum amount of Ponderosa Pine that can be sold over the first decade is 600 MMBF. The majority of volume impacted comes from the Northern and Southwestern Marketing Zones.

-- **Costs of Preparing Environmental Analyses** -- The costs, in dollars and people, of preparing environmental analyses and documents have significantly increased in recent years. This high cost is impacting all National Forests and is putting a significant portion of volume at risk. Over 465 MMBF per year is potentially at risk within the State.

-- **Roadless vs. Roaded Lands** -- The controversy surrounding timber harvest in roadless areas is affecting all Forests, some significantly. Many Forests have reached their threshold levels in terms of harvesting timber in roaded areas and are now having to more heavily depend upon harvesting timber in roadless areas. Due to the high level of controversy surrounding harvesting in roadless areas, much of this volume is at risk. Approximately 230 MMBF per year is expected to come from roadless areas.

-- **Mortality (Fire, Insect, & Disease)** -- Due to severe drought conditions recently experienced in the State, an increase is mortality has occurred. This has occurred by large scale increases in fire, or increases in insect and disease due to the high stress conditions placed upon the trees by consecutive drought years. The amount of timber impacted by this situation is difficult to estimate, although Southern Idaho is expected to be the area most impacted.

-- **Below-Cost Timber Sale Programs** -- 4 of the 10 National Forests within the State of Idaho have timber sale programs that meet the Forest Service's definition of "below-cost". A proposed policy relative to below-cost timber sale program has recently been released for public review and comment. The exact consequences of implementing this policy and it's impact on timber supply within the State is not fully known at this time.

-- **Clearcutting vs. Selection/Shelterwood Harvest Methods** -- A shift away from clearcutting to shelterwood/selection silvicultural methods is taking place on all National Forests. This shift will obviously impact the amount of volume removed from any given acre of land, however the overall impact in terms of timber supply is unknown.

-- **Log Transfers from the State of Idaho** -- The transfer of logs to timber purchasers out of State is minimal at this time (although the trend appears to be growing). Only about 50 MMBF per year is flowing to sources out of the State of Idaho. There is concern, however, that harvest level were set on some National Forests for the purpose of providing some type of stability to local communities. This stability to the local communities cannot be achieved if a large portion of the timber were to flow out of the local area.

-- **Old Growth Timber** -- The definition of old growth and the total amount of old growth timber is not fully known and inventoried on most National Forests. The issue of old growth timber is likely to have some affect on timber supply over the long-term, however, the exact level of impact is not known at this time.

-- **Timber Sale Planning (Pipeline)** -- Disruptions in the timber sale planning process (pipeline) will be significant in many parts of the State. About 100 MMBF per year is needed to fill the pipeline to insure a smooth and steady flow of timber. The Northern part of the State is the most impacted. Over 80 percent of the 100 MMBF is needed in the Northern Marketing Area to fill the pipeline.

-- **Water Quality & Fish Habitat Quality** -- Of the issues being addressed on the National Forests in Idaho, none have had more effect and none have more potential for long-term effect than the water quality and fish habitat quality issue. Although the exact impacts to future timber supply are unknown at this time, substantial amounts of timber volume could be impacted, especially in Northern and Southwestern Idaho.

-- **Miscellaneous Forest Issues** -- Local Forest level issues that may affect timber supply levels include inaccurate Forest Planning projections, conflicts in Forest Plan standards and guidelines, wildlife habitat for both T&E and other species, and changes in land ownership. One issue of major significance is the expected harvest levels on the Targhee National Forest. Many of the Forest plan objectives on this Forest have been achieved and consequently the amount of timber harvesting taking place must be reduced. Timber harvest levels on the Targhee National Forest are expected to drop by over 50 percent within the next 4 to 5 years.

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IDAHO TIMBER SUPPLY ISSUES

INTRODUCTION

When establishing harvest levels for the National Forests, it is important that the USDA Forest Service assess how National Forest timber supply opportunities relate to timber supply potentials from other forest ownerships. It was for this reason that the Forest Service developed "A Report on Idaho's Timber Supply" (LeVere, 1987).

At that time, only one National Forest in the State of Idaho had a Forest plan that was finalized. Allowable Sale Quantity (ASQ) projections used in the study on the remaining 9 Forests in the State were developed using either draft or pre-draft information. Now that all National Forests within the State of Idaho have completed their final Forest plans, it is timely to re-examine some of the projections forecast in the earlier supply study.

However, it is also necessary to go beyond just examining ASQ levels. Monitoring of Forest plans has revealed that timber volumes actually harvested are much less than the projected ASQ levels. This paper attempts to address some of the major issues that are creating this situation on the National Forests within the State of Idaho.

To accomplish this re-examination, this paper first reviews the findings of the previous supply study. Then, an updated review of Allowable Sale Quantity (ASQ), timber offer, timber sold, timber harvested and timber volume under contract from National Forests is presented. Finally, this paper examines the new challenges currently facing the Forest Service.

REVISITING THE "REPORT ON IDAHO'S TIMBER SUPPLY"

The purpose of the Idaho timber supply study was to define and understand the role and potential of National Forest timber supplies in the State of Idaho for sustaining regional economies during the next 10 to 15 years. The report was developed to specifically address the following problem statements:

-- Given a 10-year median harvest figure of 1.731 billion BF/year in the State of Idaho, what are the possible job/income impacts of the aggregate sale levels proposed in the preferred Forest plan alternatives?

-- What are the supply possibilities from National Forest System lands to offset proposed deviations for the 1.731 billion BF/year?

-- What are the supply possibilities from private industrial lands, other public lands, private non-industrial lands, and State lands to offset deviations from the 1.731 billion BF/year?

-- What are the long-term inventory implications for the various ownerships?

The report was one piece of information that could be used in selecting the preferred alternative in National Forest Plans in the State of Idaho. It was

an analytical inquiry, and should not have been construed as a decision document.

Historic annual harvest levels in Idaho have hovered around 1.7 billion board feet. As Plans for the National Forests were being completed in the mid-1980's, some people speculated that harvest on timber industry lands would decline, raising the question about the future, especially as it pertained to maintaining employment levels in the State.

The following are some key conclusions from the earlier (1987) report:

Northern Idaho Findings

Key findings for Northern Idaho were:

-- Timber supply is adequate to maintain and even increase timber harvest levels above historic levels for the next 10 years.

-- Harvest levels cannot be maintained from private industrial lands beyond 10 years. Exactly when the decline will come is not known, but most scenarios show it at its lowest level by 2010. It is likely to start down by 2000.

-- Replacing this harvest with National Forest timber could not be done under the Forest Plans.

The graph below illustrates the continuation of historic harvest levels from private nonindustrial lands, other public lands, and State lands, and National Forest harvest levels under preferred alternatives for Northern Idaho.

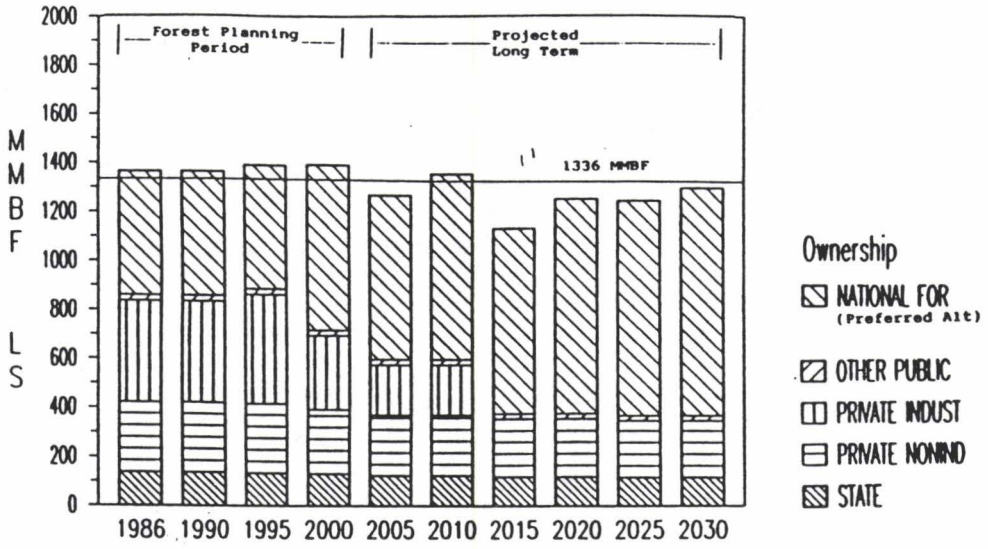


Figure 1. -- Projected Harvest by Ownership Class for Scenario 1 (Northern Idaho) [After LeVere, 1987].

Historic harvest levels from private industrial lands cannot be maintained beyond the next 10 to 15 years (the timing, magnitude, and duration of the actual reduction is unknown).

Southern Idaho Findings

Key findings for Southern Idaho were:

-- The current average harvest level on private industrial lands cannot be maintained beyond the next 15 years.

-- National Forest harvest comprises about 75 percent of the total. Under Forest Plans the total would remain about the same.

-- Other ownerships (other public, private nonindustrial and State) could help offset decreases but only until about 2010.

The graph below illustrates the continuation of historic harvest levels from private nonindustrial lands, other public lands, and State lands, and National Forest harvest levels under preferred alternatives for Southern Idaho. Historic harvest levels from private industrial lands cannot be maintained beyond the next 10 to 15 years (the timing, magnitude, and duration of the actual reduction is unknown).

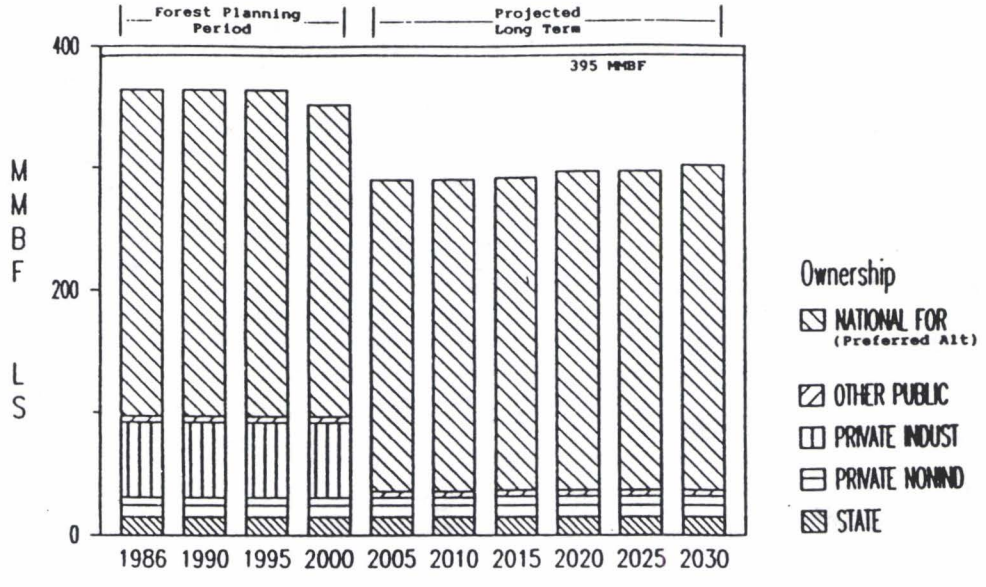


Figure 2. -- Projected Harvest by Ownership Class for Scenario 1 (Southern Idaho) [After LeVere, 1987].

Statewide Findings

Key findings for the State were:

-- State lands could sustain a slight increase, from 185 mmbf to about 200 mmbf.

Since the time that the "Report of Idaho's Timber supply" was issued in 1987, all Forest plans within the State of Idaho have been finalized. In moving from draft to final plans many of the National Forests made changes in their allowable sale quantities (ASQ's).

ASQ Levels

The National Forest Management Act (NFMA) requires the determination for each National Forest of an ASQ. The ASQ is the quantity of timber that may be sold from the area of suitable land covered by the forest plan for a time period specified by the plan. This definition is given in the implementing regulations (36 CFR Part 219) for NFMA. The ASQ is usually expressed on an average annual basis for the first decade shown in the plan.

Prior to NFMA, allowable sale levels in timber management plans were expressed as the "potential yield." Included in potential yield calculations were some lands that have been determined to be unsuitable for timber production in the new plans, due to the standards in NFMA. Thus, the ASQ for a given forest is normally less than the potential yield under the previous plan.

National Forest	New Forest Plan Allowable Sale Quantity	Old TM Plan Potential Yield
Clearwater	173 MMBF/year	255 MMBF/year
Idaho Panhandle	280 MMBF/year	375 MMBF/year
Nez Perce	108 MMBF/year	134 MMBF/year
Boise	85 MMBF/year	212 MMBF/year
Payette	81 MMBF/year	107 MMBF/year
Caribou	11 MMBF/year	31 MMBF/year
Challis	3 MMBF/year	69 MMBF/year
Salmon	22 MMBF/year	56 MMBF/year
Sawtooth	10 MMBF/year	33 MMBF/year
Targhee	70 MMBF/year	63 MMBF/year
Total	843 MMBF/year	1,335 MMBF/year

Given these new ASQ levels, the findings of the earlier study may no longer be appropriate.

Evaluating Short-falls in Supply

In the previous paper, "Report on Idaho's Timber Supply" (1987), the evaluation of short-falls in timber supply was calculated based upon the historic harvest levels during the ten year period 1975-1984. This harvest level was referred to as the median. Given that supply figures have been updated (1980-1989) for all forest ownerships (Appendix A), it is appropriate to recalculate the median figure that is used for comparison purposes.

The following section shows the new calculation for this median figure, and then evaluates revised supply projections compared to the new median.

Historic Harvests for the State of Idaho

The tables in Appendix A are the Idaho timber harvest summaries for Northern Idaho, Southern Idaho, and the total State of Idaho. In order to have comparable figures with the "Report on Idaho's Timber Supply", the same procedure was used here as was performed in the earlier study. Therefore, the median of the total harvest (between 1980-1989) was used for comparison purposes.

Total Idaho: 1,658,172 MBF (median figure)

The median of the State total was prorated to the Northern and Southern areas given the appropriate percentages of their particular mean totals (the individual medians for Northern and Southern Idaho were not used because they are not additive):

Means:

Northern Idaho:	1,265,251 MBF
Southern Idaho:	375,483 MBF
Total Idaho:	1,640,734 MBF

Northern Idaho:

$$\frac{1{,}265{,}251}{1{,}640{,}734} = 77.1\% \quad \text{therefore, } 77.1\% \times 1{,}658{,}172 = 1{,}278{,}451 \text{ MBF}$$

Southern Idaho:

$$\frac{375{,}483}{1{,}640{,}734} = 22.9\% \quad \text{therefore, } 22.9\% \times 1{,}658{,}172 = 379{,}721 \text{ MBF}$$

These are the figures that were used to represent the median year for timber harvest in the State of Idaho. These numbers will be used in Northern and Southern Idaho for comparative purposes in the development of the supply scenarios discussed below.

Revised National Forest Supply Projections

Now that all of the Forest plans in the State of Idaho have been completed, it is appropriate to reexamine some of the projections made in the earlier supply study. Therefore, using the new ASQ levels for the National Forest System lands within the State, Scenario #1 (continuation of historic harvest levels from private nonindustrial lands, other public lands, and State lands, and National Forest harvest levels under the Forest plans) from the "Report on Idaho's Timber Supply" was recalculated. This new supply projection was then compared to the recalculated median figure that was used for estimating the

historic harvest levels for the State of Idaho. The figures for these new supply projections can be found in Appendix B.

Revised National Forest Supply Projections with New Comparison Point

Northern Idaho Findings

Under this revised scenario, the findings for Northern Idaho are somewhat different from those of the earlier timber supply study. Timber supply levels appear to be adequate up to the year 2015. At this point there does exist a slight short-fall or gap when compared to the new median figure for historic harvest levels. From the year 2020 to the end of the planning horizon, the short-fall again no longer exists. In those years in which no short-fall is predicted, they are now projected to have substantial amounts of volume in excess of the new median historic harvest level used for comparison purposes.

Figure 3 displays the projected harvest by ownership class under this revised scenario for Northern Idaho with the new comparison figure.

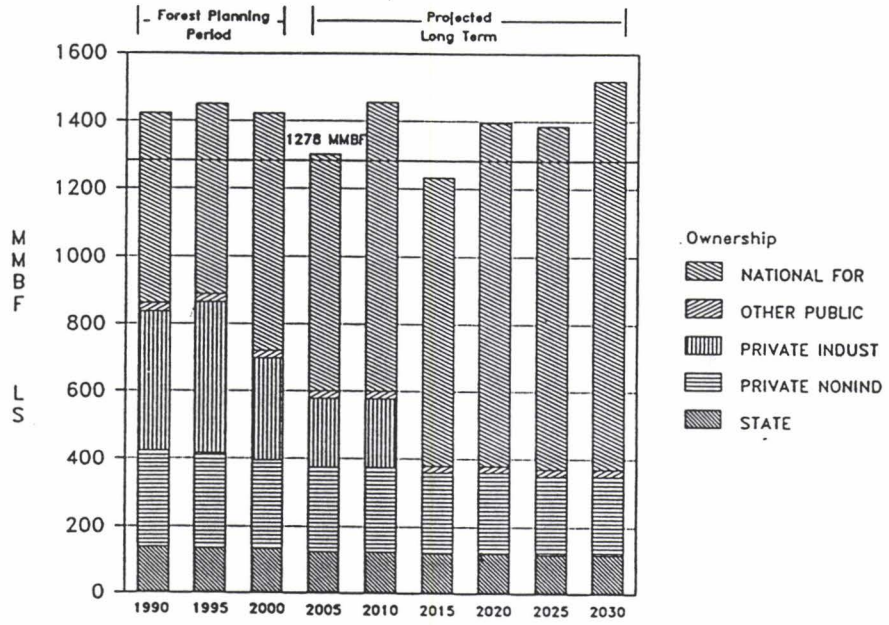


Figure 3. -- Projected Harvest by Ownership Class with new Comparison Figure (Northern Idaho).

Southern Idaho Findings

Under this revised scenario, the findings for Southern Idaho are somewhat different from those of the earlier timber supply study. Timber supply levels appear to be adequate up to the year 2000. The projected volume in the year 2000 nearly meets the median figure. A short-fall or gap still exists over the projected long-term when compared to the "new" median historic harvest level. This is due to the dramatic drop-off in volume from private industrial lands. It should be noted, however, that the short-fall has lessened to some degree.

Figure 4 displays the projected harvest by ownership class under this revised scenario for Southern Idaho with the new comparison figure.

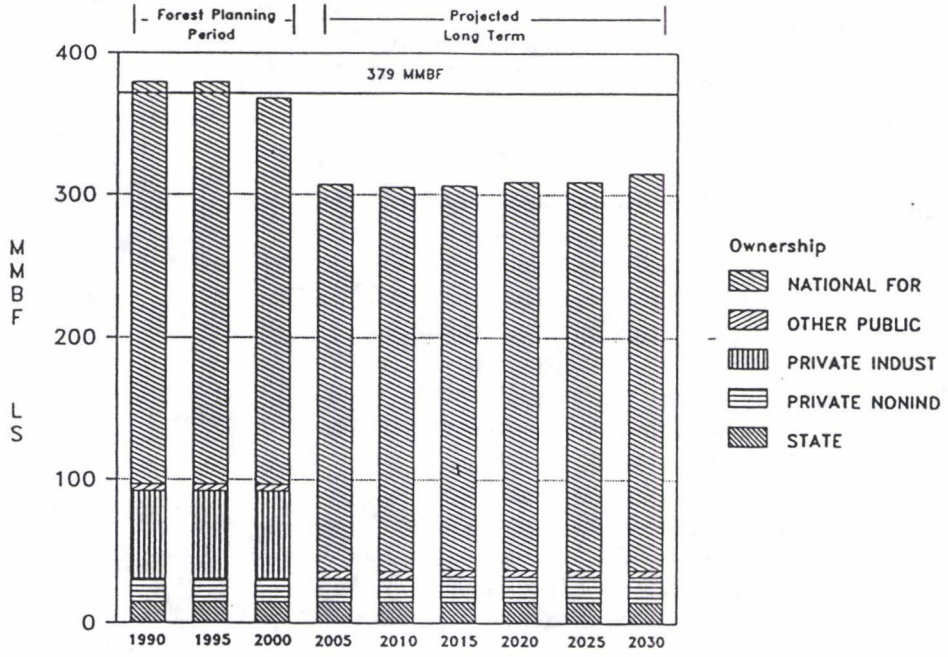


Figure 4. -- Projected Harvest by Ownership Class with New Comparison Figure (Southern Idaho).

Summary Findings

The methodology or process used in the 1987 timber supply study only evaluated National Forest timber supply from the perspective of full accomplishment of ASQ. ASQ is an estimate of the projected volume for the first decade of the planning period. There can be significant gaps between the amount of volume that is estimated or projected, and the amount of volume that is actually supplied to timber purchasers. Therefore, evaluating National Forest timber supply by solely looking at ASQ does not provide a complete picture of the actual situation.

In using the same methodology from the 1987 report, the findings for Northern Idaho are somewhat different from those of the earlier timber supply study. Timber supply levels appear to be adequate up to the year 2015. At this point, a slight short-fall in timber supply is predicted. From the year 2020 to the end of the planning horizon, the short-fall no longer exists. When no short-fall is predicted, substantial amounts of surplus volume are expected. The findings for Southern Idaho are somewhat different than those of the earlier timber supply study. Timber supply levels appear to be adequate up to the year 2000. The projected volume in the year 2000 nearly meets projected needs. A short-fall is predicted over the long-term. This is due to the

dramatic drop-off in volume from private industrial lands. It should be noted, however, that the short-fall has lessened to some degree.

However, this analysis only evaluates timber supply from the perspective of full accomplishment of ASQ and does not provide a complete picture of the actual National Forest timber supply situation. As pointed out earlier, ASQ is an estimate of the projected volume for the first decade of the planning period. The can be significant gaps between the amount of volume that is estimated or projected, and the amount of volume that is actually supplied to timber purchasers.

TIMBER VOLUME OFFERED, SOLD, AND HARVESTED ON IDAHO NATIONAL FORESTS

Each year National Forests offer timber for sale. The amount of timber offered is, of course, based upon the ASQ established in the Forest Planning process. Either all or a portion of the timber offered for sale will sell. The purchaser has a limited number of years to actually harvest the sold volume. Many variables, both internal and external to the Forest Service, can affect the amount of volume offered, sold, and harvest over time on each National Forest.

Given that it is the volume actually harvested each year that can substantially impact local economies within the State of Idaho, it is important to examine each of these component levels of volume for local markets. To isolate impacts on local economies this analysis is summarized by marketing zones and the State as a whole. The three marketing zones are the Northern (Clearwater, Idaho Panhandle and Nez Perce National Forests), Southwestern (Boise and Payette National Forests) and Southeastern (Caribou, Challis, Salmon, Sawtooth and Targhee National Forests).

Volume Offered Levels

This is the amount of timber volume offered for sale once it has had adequate environmental documentation prepared. This figure can vary from the ASQ level due to timber sales that are appealed and litigated, and due to inadequate funding in any given year to achieve the planned ASQ level.

Volume offered figures for each National Forest in Idaho and the State total can be found in Appendix C. The 10 year average of these figures is also compared to the ASQ for each National Forest. In terms of total volume offered, the 10 year average for the period 1980 to 1989 was 92%, 99%, and 121% of the planned ASQ for all National Forests in Northern, Southwestern, and Southeastern Idaho respectively, and 98% of the planned ASQ for all National Forests within the State (See Figure 5).

Volume Sold Levels

This is the amount of timber offered that actually sold. This figure can vary from volume offered in that some volume does not sell, and in some cases it includes volume that has been reofferred from timber sales that did not previously sell.

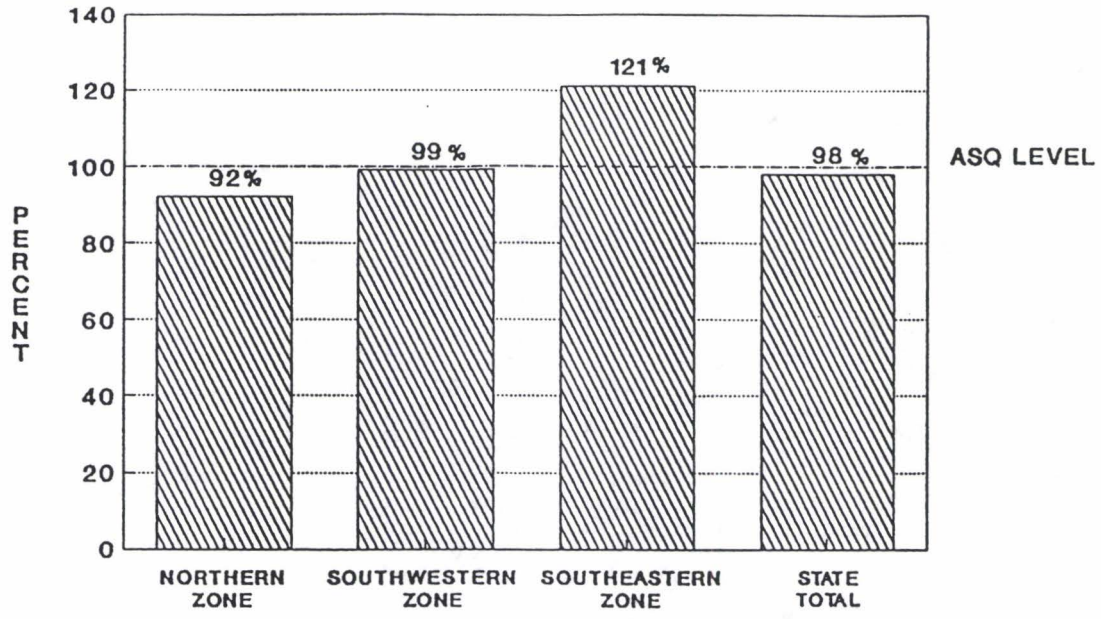


Figure 5. -- Amount of Volume Offered by Marketing Zone and State Total as a percent of ASQ.

Volume sold figures for each National Forest in Idaho and the State total can also be found in Appendix C. The 10 year average of these figures is also compared to the ASQ for each National Forest. In terms of total volume sold, the 10 year average for the period 1980 to 1989 was 83%, 88%, and 108% of the planned ASQ for all National Forests in Northern, Southwestern, and Southeastern Idaho respectively, and 87% of the planned ASQ for all National Forests within the State (See Figure 6).

Volume Harvested Levels

Volume harvested is the actual amount of volume that is supplied to timber mills for processing. This figure can vary from volume sold figures in that timber purchasers usually have up to 3 years to actually harvest the timber after it has been purchased.

Volume harvested figures for each National Forest in Idaho and the State total can also be found in Appendix C. The 10 year average of these figures is also compared to the ASQ for each National Forest. In terms of total volume harvested, the 10 year average for the period 1980 to 1989 was 78%, 90%, and 108% of the planned ASQ for all National Forests in Northern, Southwestern, and Southeastern Idaho respectively, and 84% of the planned ASQ for all National Forests within the State (See Figure 7).

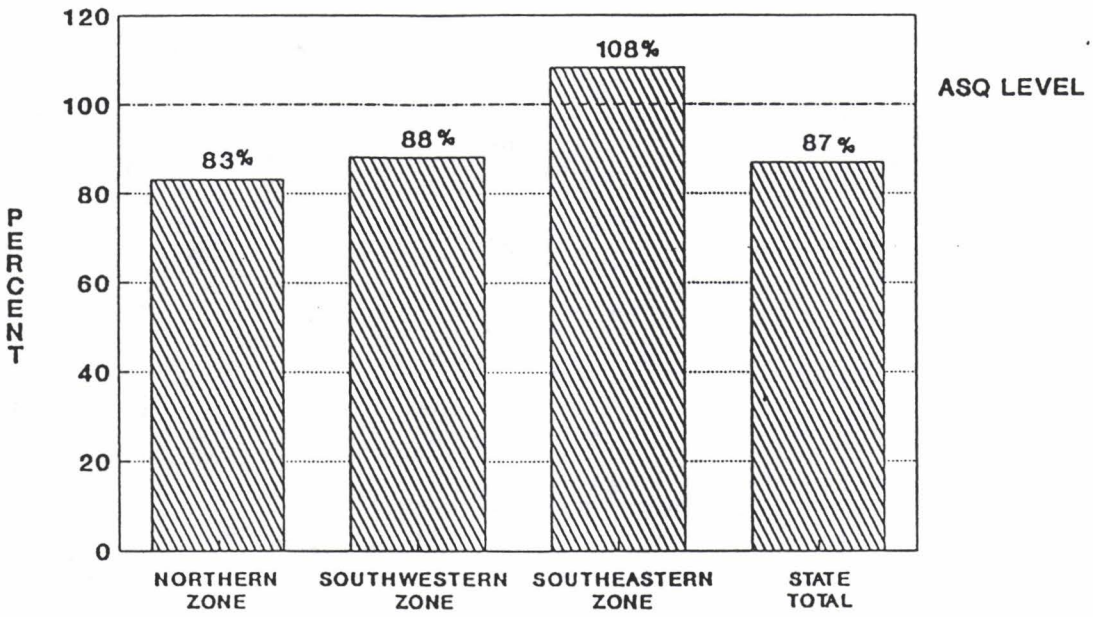


Figure 6. -- Amount of Volume Sold by Marketing Zone and State Total as a percent of ASQ.

A graphic display comparing volume offered, sold, and harvested to ASQ's for each marketing zone and the State total can be found in Figure 8.

At each point in the timber sale process on the National Forests the amount of volume as compared to the ASQ can be substantially less, as evidenced by the difference in volume offered and harvested. Keep in mind that the figures for National Forests used in the 1987 timber supply study and those above are based upon ASQ. This reduction in volume is a widening of short-falls or gaps that were predicted in the 1987 timber supply and displayed above.

Figure 8 summarizes volume offered, sold and harvested compared to ASQ for the marketing zones and the State.

Volume Under Contract

Another indicator of supply from National Forests is volume under contract.

Preparation of timber sales is a complicated process that may take as long as 5 years from the initial concept to the award of the sale. To provide for the orderly flow of sales, the Forest Service strives to complete the field work a year ahead, including environmental analyses, volume estimates, and road surveys and designs. The only remaining work before the sale date is the appraisal and auction.

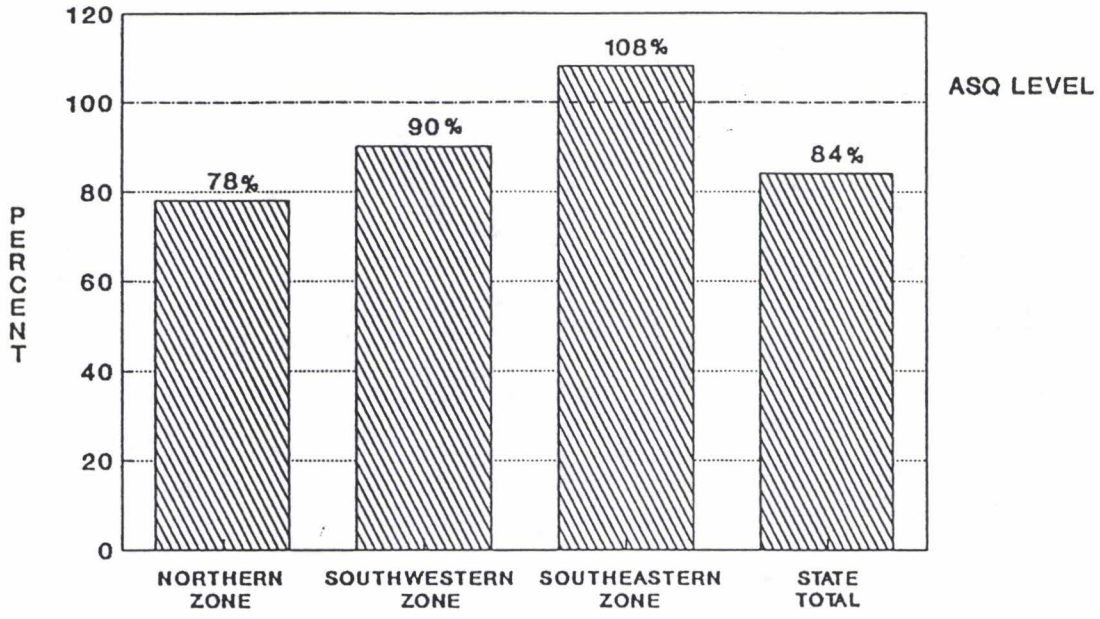
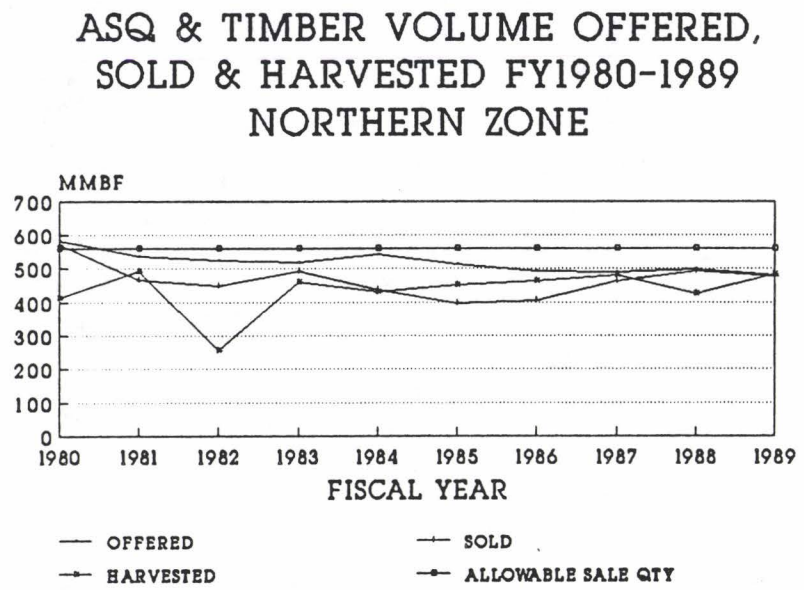


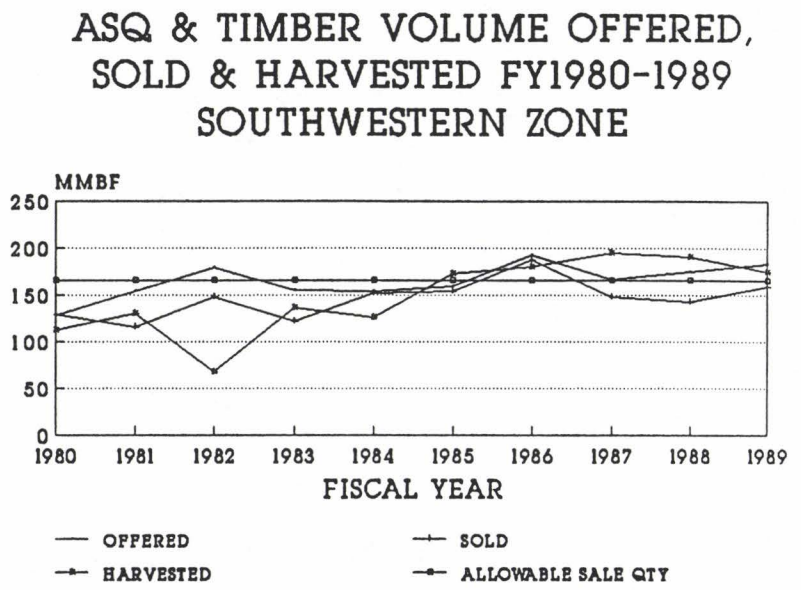
Figure 7. -- Amount of Volume harvested by Marketing Zone and State Total as a percent of ASQ.

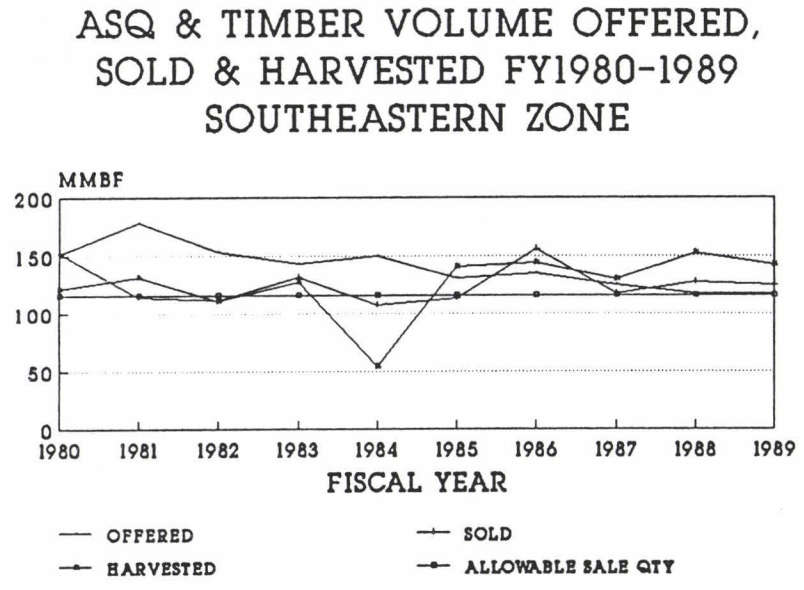
Because of the extended period of time it takes to offer and award a timber sale, National Forests strive to have many sales in the "pipeline" to be offered, sold, and harvested. To stay in business, timber purchasers need a sustained flow of timber for harvest each year. Therefore, many purchasers attempt to buy enough timber so that they have a least 1 to 2 years worth of volume under contract, and available for harvesting.

If National Forests are unable to offer timber, the amount of volume under contract will decline rapidly. A rapid decline in volume under contract is a good indicator that the timber supply from a National Forests may have been disrupted.

The amount of volume under contract for each National Forest and marketing zone in Idaho and the State total can be found in Appendix C. In terms of total volume under contract, the 10 year average for the period 1980 to 1989 was







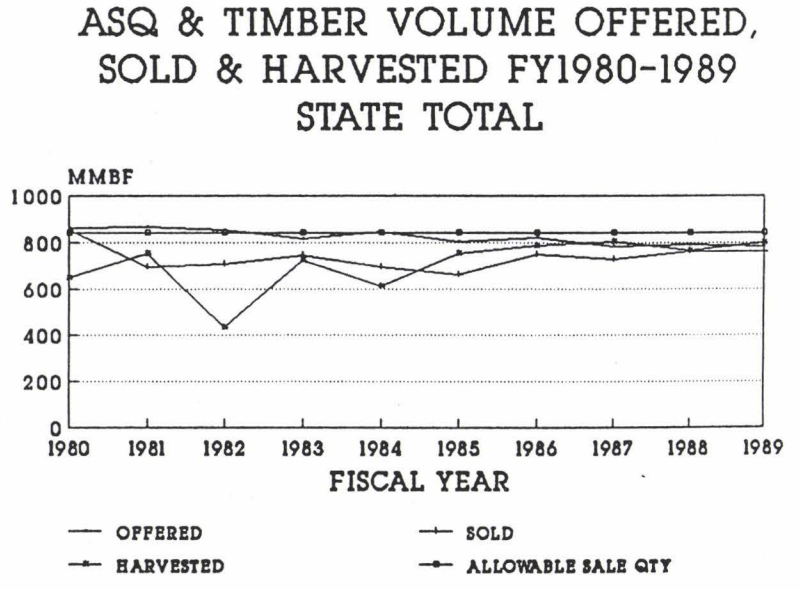


Figure 8. -- Timber Volume Offered, Sold, and Harvested Compared to ASQ for each Marketing Zone in Idaho and State Total.

296%, 281%, and 178% of the planned ASQ for all National Forests in Northern, Southwestern, and Southeastern Idaho respectively, and 277% of the planned ASQ for all National Forests within the State (See Figure 9).

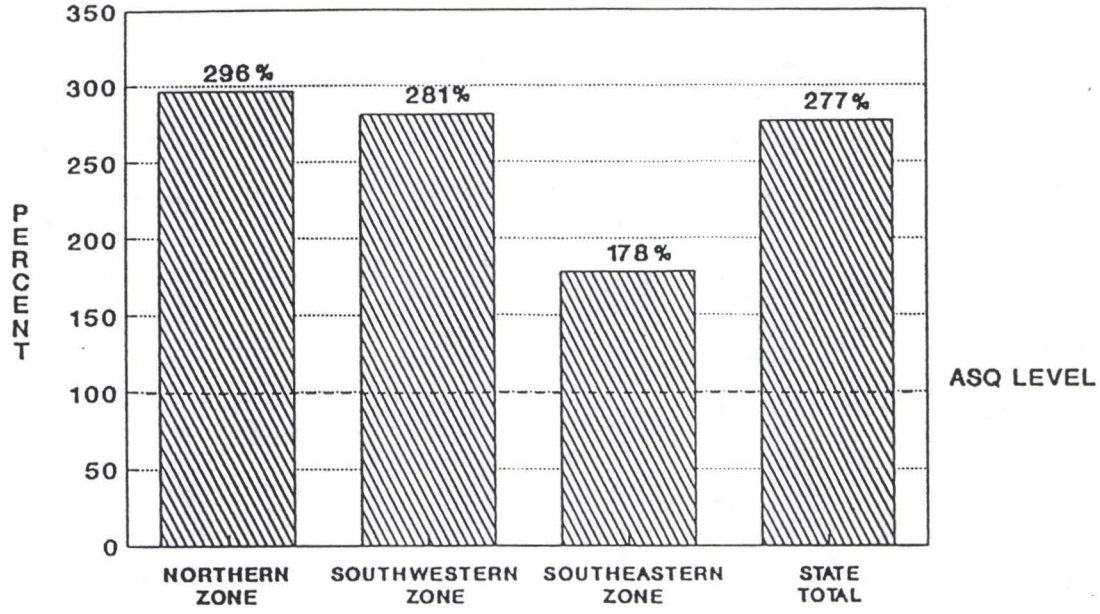


Figure 9. -- Amount of Volume Under Contract by Marketing Zone and State Total as a percent of ASQ.

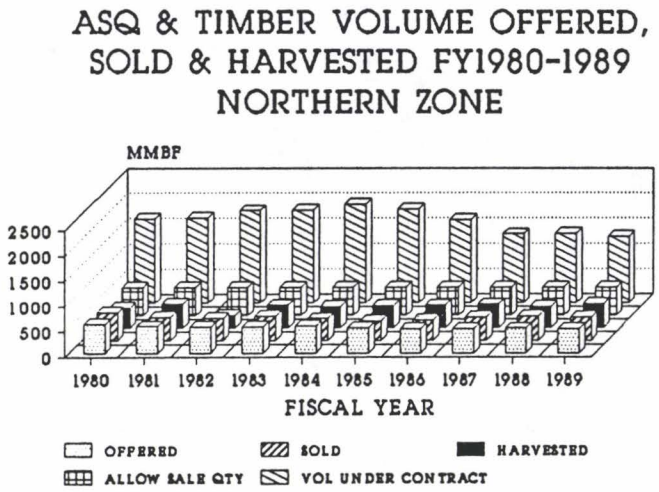
A graphic display of volume under contract compared to offered, sold, and harvested figures for each marketing zone in Idaho and State total can be seen in Figure 10. Of concern is the recent reduction in volume under contract in the southeastern region (61 percent of ASQ in 1989).

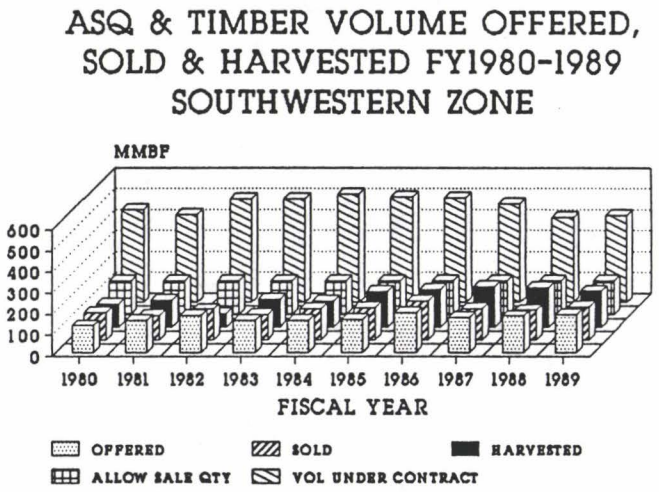
Chargeable vs. Nonchargeable Volume

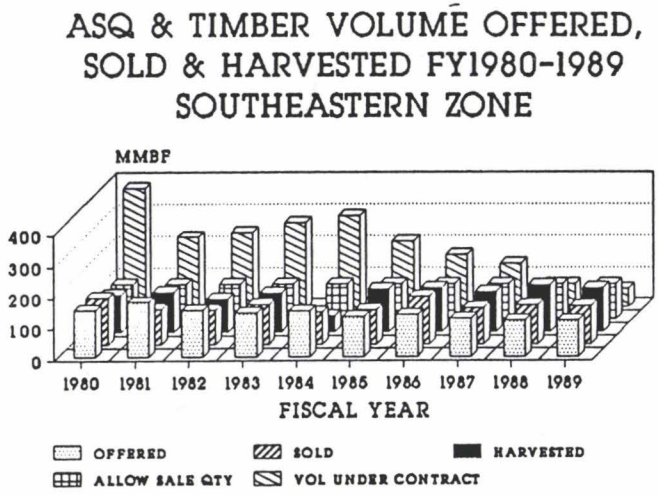
Timber volumes reported by the Forest Service as volume offered, sold, or harvested are compared to a value known as the timber sale program quantity.

The timber sale program quantity is the volume of timber planned for sale during the first decade of the planning horizon. It includes the allowable sale quantity (chargeable volume) and any additional material (nonchargeable volume) planned for sale. The timber sale program quantity is usually expressed as an annual average for the first decade (USDA Forest Service, 1985).

Chargeable volume is all volume included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity, based on regional utilization standards (USDA Forest Service, 1985).







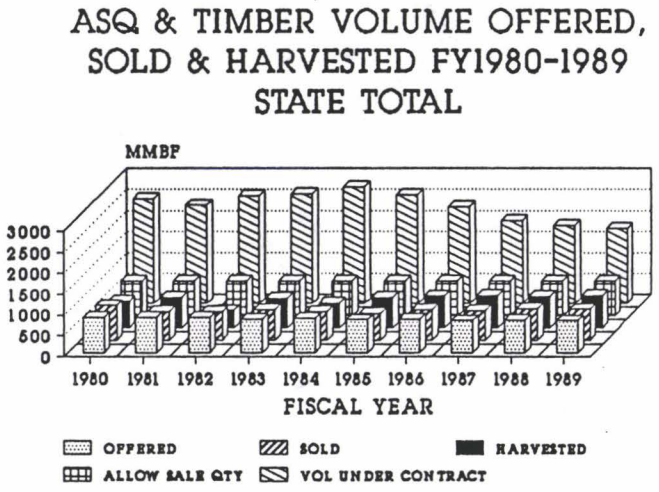


Figure 10. -- Volume Under Contract Compared to Offered, Sold, and Harvested Figures for each Marketing Zone in Idaho and State Total.

Nonchargeable volume is all volume not included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity (USDA Forest Service, 1985).

The chargeable and nonchargeable portion of the volume harvested figures (which are displayed in Appendix C) are broken out in Appendix D. In terms of total chargeable volume, the 10 year average for the period 1980 to 1989 was 65%, 81%, and 98% of the planned ASQ for all National Forests in Northern, Southwestern, and Southeastern Idaho respectively, and 73% of the planned ASQ for all National Forests within the State (See Figure 11).

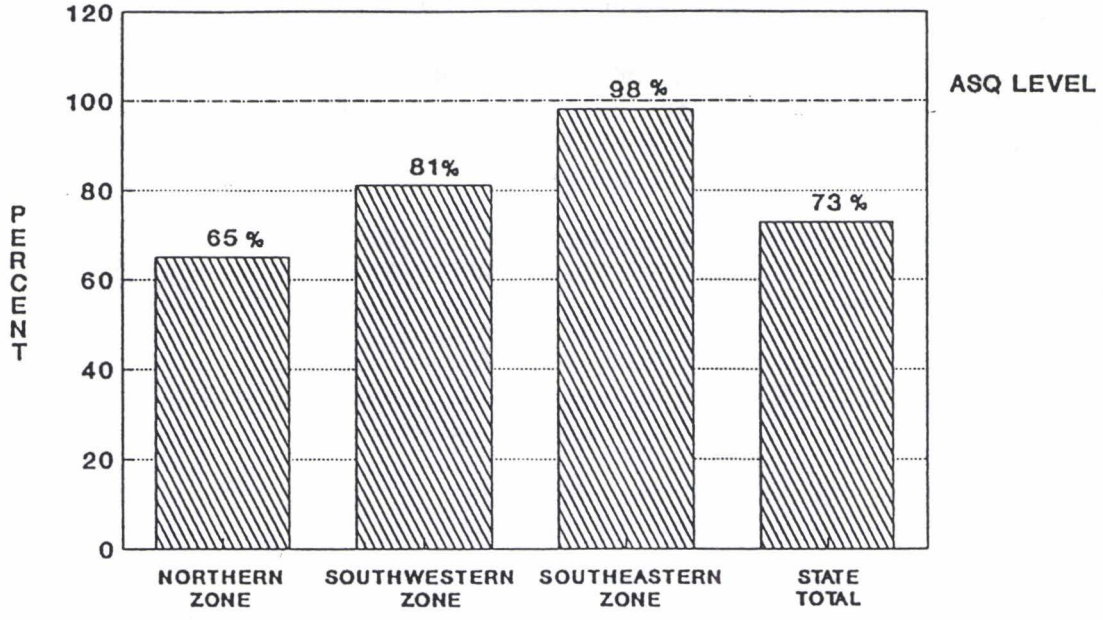


Figure 11. -- Amount of Chargeable Volume by Marketing Zone and State Total as a percent of ASQ.

Summary Findings

A State level summary indicates that volume offered for sale is 98 percent of ASQ, timber sold is 87 percent of ASQ, volume harvested is 84 percent of ASQ and volume under contract is 277 percent (2.77 times) of ASQ. When only chargeable volume is considered, 73 percent of ASQ is harvested. Regional variation does exist. Of most concern is the recent drop in volume under contract in the southeast (61 percent of ASQ in 1989).

In evaluating Northern Idaho, the amount of chargeable volume harvested is 65 percent of the total ASQ. Therefore, the short-falls in supply (predicted above) are exacerbated by this situation. If this gap between the amount of chargeable volume actually harvested and the ASQ continues, an additional 200 MMBF per year will not be available to local timber purchasers in Northern Idaho.

The situation is not as prevalent in Southern Idaho. In evaluating Southern Idaho, the amount of chargeable volume harvested is 88 percent of the total ASQ. Therefore, the short-falls in supply (predicted above) are slightly exacerbated by this situation. If this gap between the amount of chargeable volume actually harvested and the ASQ continues, an additional 34 MMBF per year will not be available to local timber purchasers in Southern Idaho.

Several issues concerning the overall management of the National Forests are currently influencing the levels of timber actually harvested on the Forest. Many of these issues have the potential to even further impact National Forest timber harvest levels in the future.

ISSUES POTENTIALLY AFFECTING TIMBER SUPPLY FROM NATIONAL FORESTS

There are many issues that can and will affect timber volume levels being planned, offered, sold, and harvested from the National Forests in Idaho. Ten major issues have been identified that will likely affect future timber supply levels. These ten are:

1) Non-Interchangeable Components (NIC's)
2) Increasing Costs of Preparing Environmental Documents
3) Roadless vs. Roaded
4) Mortality -- Fire, Insect & Disease
5) Below-Cost Timber Sale Programs
6) Even-aged vs. Uneven-aged Silvicultural Methods
7) Log Transfers from the State of Idaho
8) Old Growth Timber
9) Timber Sale Planning (Pipeline)
10) Water Quality/Fish Habitat Quality

These issues are discussed in terms of impacts on the three marketing zones--Northern, Southwestern and Southeastern. Important Forest specific issues are discussed after these nine are presented. The projected impacts are estimates of how the issue could affect the timber program. Since the actual impact of these issues will not be known for years to come, the estimates of impact are very speculative in nature. These estimates are provided to increase awareness of possible impacts as well as provide a general indication of possible downfalls in timber supply. Quantitative estimates are summarized in Appendix E.

Non-interchangeable Components (NIC's)

ASQ may be made up of several non-interchangeable components. Components of the ASQ represent portions of ASQ volume identified by either species or geographic location. For example, one component of the ASQ may be high elevation lodgepole pine, whereas another may be a ponderosa pine, spruce-fir type. If demand does not currently exist for the lesser valued lodgepole pine type, the higher valued ponderosa pine, spruce-fir type can not be offered in its place if these are non-interchangeable components. Similarly, roadless areas can be identified as geographic components of ASQ. If this component is non-interchangeable, volume from roaded areas can not be substituted to meet

ASQ. This can mean lower timber volumes from National Forests when non-interchangeable components can not be offered for sale.

Implications for Marketing Zones

Northern Zone--Timber supply levels could be affected by this issue. Particularly from those Forests with large amounts of volume in roadless areas (discussed later).

Southwestern Zone--Timber supply levels could be affected by this issue. Estimates from the Payette and Boise National Forests indicate that 178 MMBF will possibly be affected by this issue.

Southeastern Zone--Timber supply levels will most likely be minimally affected by this issue.

Increasing Costs of Preparing Environmental Documents

Concerns about management of the National Forests have increased dramatically in recent years. Attention to the environment has focused many of these concerns. The National Forest Management Act (NFMA) and the National Environmental Policy Act (NEPA) set the stage for public involvement in management decisions. Over the years the public's awareness of their role in this process has grown. Due to increased concerns related to Forest Service management proposals, and the growing awareness of interest groups, a substantial increase in the cost of preparing environmental documents has occurred. This increased cost, in conjunction with an increase in appeals and litigation, has limited the Forest Service's ability to meet planned ASQ's from the National Forests.

The increase in number of administrative appeals and lawsuits, especially related to timber management on the National Forests, is significant. Between 1983 and 1988, the total number of appeals filed annually nationwide increased from 584 to 1,298. Of the total appeals filed, 42 percent of the 1983 and 60 percent of the 1988 appeals were related to either timber sales or forest plans.

Costs to meet NEPA have increased dramatically due to an ever increasing "standard" of quality derived from case law and appeal decisions. Most appeals of Forest Service decisions are based on procedural aspects of meeting the requirements of NEPA. When appeals successfully challenge procedural aspects of meeting NEPA, new direction follows to improve the quality of NEPA analysis and documentation. New direction can mean a more complicated process and, as a result, the cost to meet NEPA increases.

As costs and challenges increase, timber supply is affected in two ways. First, increased costs in timber sale preparation, given fairly constant budgets, reduces the amount of timber that can be prepared for sale. Second, challenges slow the timber sale offer process so less volume can be offered.

To help control costs, the Forest Service established a NEPA/NFMA task force to review the forest plan implementation process and to recommend ways to strengthen resource management decisions so that they can be successfully

implemented on the ground. As a result of the Task Force's efforts, the Forest Service conducted a series of national workshops on successful decision-making for Forest Supervisors. The Forest Service is now developing a detailed program to train other personnel at the Forest and Ranger District levels in the procedural requirements of NEPA, NFMA, and other environmental laws. This training will better enable personnel to conduct and document environmental analyses, conduct public involvement, and engage in conflict resolution.

The appeal regulations have also recently been revised. The revisions provide a less cumbersome and faster moving process to facilitate quicker disposition of the appeal issue. Key revisions in the appeal regulations include: restricting the time period in which intervenor status is granted; reducing the number of organizational levels to which appeals can generally be made; providing the Chief discretionary review of Regional Foresters' decisions; restricting the time allowed for the completion of the appeals process; and reducing the paperwork generated during the appeals process. A procedure to assure notice of decisions to the public has also been adopted.

Because of the projected increase in resource demands as described in the 1989 RPA Assessment, conflicts over the best blend of resource uses are expected to increase in the future. Therefore, it is anticipated that even if the appeal process is streamlined further, the impacts of appeals and litigation will continue to be sizable.

Implications for Marketing Zones

Northern Zone--Costs have increased dramatically on all Forests in the Zone. For example, costs on the Nez Perce National Forest have increased from $1.75 per MBF to as high as $8.00 per MBF. On the Idaho Panhandle National Forests costs have risen from $12.00 per MBF to $45.00 per MBF. These costs can be attributed to increased quality in analysis and documentation required to harvest sensitive roadless areas. High NEPA cost volume is estimated at 4,120 MMBF for the zone.

Southwestern Zone--Timber supply levels could be affected by this issue. Estimates from the Boise National Forests indicate that costs have increased form $20.00 per MBF to $40.00 per MBF. Costs have increased to the point that preparation of environmental documents exceed, at times, the other timber sale preparation costs. The Payette National Forest estimates that NEPA related costs have reached $28 per MBF compared to $14 per MBF estimated in the Forest Plan. Approximately 373 MMBF could be affected in the zone.

Southeastern Zone--Timber supply levels could be affected by increased NEPA costs. As examples, costs have risen on the Salmon from $13 per MBF to $23 per MBF and on the Targhee from $2.50 per MBF to $7.25 per MBF. 157 MMBF have been designated as potentially high NEPA cost volume.

Roadless vs. Roaded

As timber harvests have progressed on the National Forests, the types of land where timber harvest takes place have changed. In earlier years, timber harvests took place on lands that could be accessed using conventional means and at a time when environmental disturbance was socially of less concern.

These lands are predominately the roaded lands of the National Forests. Today, to achieve improved timber growth and yield and to contribute to society's timber supply seeds, harvest is planned for lands with less access (the roadless lands) where much attention must be given to road design and non-conventional access and log yarding to minimize environmental disturbance which is biologically and socially of very great concern. These types of lands are predominately the roadless portion of the National Forests. Timber management activities in these areas jeopardize their candidacy for future Wilderness designation. For this reason, timber harvesting plans in these areas undergo severe scrutiny by the public. The opportunity for meeting timber supply needs from these types of lands is difficult.

Public concerns over how and where timber is managed have intensified. A major unresolved conflict is the resolution of the management of roadless areas throughout the State of Idaho. This unresolved conflict is resulting in numerous appeals, threats of litigation, and as discussed previously a significant increase in costs.

If Forest Plan goals and objectives are to be achieved, timber will have to be harvested in both the roaded and inventoried roadless areas as projected in the Forest Plan analysis. The Forest Plans schedule approximately 28 percent of the timber harvest to come from the unroaded lands during this decade (See Appendix F). However, most of the burden for meeting timber harvest goals has been placed on the presently accessible roaded land base.

The Forest Service is committed to meeting Forest Plan standards and guidelines. There is a concern that if harvest trends continue, overall Forest Plan goals and objectives cannot be met in the future. The Forest Service has recently announced a proposal that will monitor the effects of management on both the roadless and roaded lands. The results will be evaluated during the 5 year Forest Plan review and when Forest Plans are revised.

The Forest Service is also proposing to amend some of the Forest Plans within the State of Idaho to separate the ASQ for the Plan period as two non-interchangeable components; the component that is to come from inventoried roadless areas, and the component that is to come from existing roaded areas.

In summary, many believe that entering these roadless areas is critical to meeting objectives as identified in the Forest Plans. However, many other publics take exception with activities that may make areas unavailable for future consideration as Wilderness.

Implications for Marketing Zones

Northern Zone--Timber supply levels will likely be reduced by this issue. The Nez Perce National Forest indicates 25-30 percent of timber offer (290 MMBF) will be from roadless areas. The Clearwater National Forest indicates that 730 MMBF will be from roadless areas. The Idaho Panhandle National Forests have scheduled 550 MMBF to be harvested in roadless areas. This issue could possibly affect 1,570 MMBF for the Zone.

Southwestern Zone--Substantial timber supply levels could be reduced by this issue. Estimates from the Payette and Boise National Forests indicate that 441

MMBF are scheduled to be harvested in roadless areas and may be difficult to offer.

Southeastern Zone--Timber supply levels will likely be reduced by this issue. Impacts could be 5 MMBF on the Challis, 40 MMBF on the Targhee, 50 MMBF on the Sawtooth, 80 MMBF on the Caribou and 118 MMBF on the Salmon National Forest. Possibly, 293 MMBF could be affected in the Zone.

Mortality -- Fire, Insect & Disease

1984 was the beginning of a drought period in Idaho. The drought has intensified since that time creating severe conditions. This situation has created serious insect infestation problems reaching epidemic in some locations. These conditions, in some areas of the State, have caused a three-fold increase in the mortality rate in timber stands on the National Forests. The drought conditions have also increased the risk of catastrophic fires in the area. An example of this was the major increase in catastrophic fire occurrences in 1989 which resulted in hundreds of thousands of acres of forestland being burned.

Implications for Marketing Zones

Northern Zone--Timber supply levels will most likely be unaffected by this issue.

Southwestern Zone--Timber supply levels will be affected by this issue. Estimates from the Payette National Forest indicate that some volume may be affected. The Boise National Forest indicates that as much as 30 MMBF may be affected by mortality.

Southeastern Zone--Timber volume levels will likely be affected by this issue. On the Salmon and the Targhee National Forest future mortality will have little effect. Most other Forests in the Marketing Zone could experience some falldown in offer of green sawlogs. However, in most cases (such as the Sawtooth) the dead trees will be salvaged to offset losses in volume.

Below-Cost Timber Sale Programs

Another emerging issue facing National Forests of Idaho is the below-cost timber sale program issue. With the overall economy of the United States and the federal deficit becoming a concern with the general public, the costs and the revenues received by the Forest Service from the timber sale program has undergone, and continues to undergo, severe public scrutiny.

The public and Congress are concerned about commercial timber sale programs on National Forests with annual costs in excess of annual revenues. Proposals have been made to eliminate these below-cost timber programs.

In FY 1990, as evaluated in the Timber Sale Program Information Reporting System (TSPIRS), the National Forests, in total, for the State of Idaho were above cost (USDA Forest Service, 1990). The National Forests showed a net gain before payments to the State of $16.56 million. After payments to the State of

Idaho ($14.598 million) the net gain was $1.962 million. However, not all National Forests in the State have above cost programs. Programs that are below-cost may be affected by this issue. Detailed TSPIRS information for fiscal years 1988-1990 is contained in Appendix G.

Environmental groups, using the Forest Service's Timber Sale Program Information Reporting System numbers (See Appendix G for State of Idaho TSPIRS results for FY 1989), conclude that 7 of the 10 National Forest timber sale programs in the State of Idaho are below-cost. As additional pressures increase related to the finances of timber sale programs on the National Forests, timber sale levels or ASQ's may be adjusted downward over time to achieve a more efficient operating level.

The Forest Service recently tested guidelines that would implement a below-cost timber sale program policy. The proposed draft policy has been released for public comment. The Forest Service will analyze the public comments and then finalize procedures to implement the below-cost timber sale program policy. The number of below-cost sales will steadily be reduced.

Implications for Marketing Zones

Northern Zone--Timber supply levels will most likely be unaffected by this issue in the short-term, however, increasing NEPA costs may change this trend over the long-term on some Forests.

Southwestern Zone--Timber supply levels could be affected by this issue. Estimates from the Payette and Boise National Forests indicate that 20 and 25 percent respectively of volume offered currently is below-cost. The Boise National Forest predicts that all future volume will be above cost.

Southeastern Zone--Timber volume levels could be affected by this issue. The Sawtooth and Targhee National Forest indicate that their timber programs are below cost. The trend for the Targhee is improving over time. The Sawtooth National Forest estimates that about 70-80 percent of their program is below-cost. On the Challis National Forest, 80-90 percent of the timber program is below cost. On the Salmon National Forest, 60-70 percent of the timber program is below cost. The Caribou National Forest indicates that about 25 percent of the timber program is below-cost.

Even-aged vs. Uneven-aged Silvicultural Methods

Another emerging issue related to timber harvesting on the National Forests is the application of even-aged management silvicultural techniques (clearcutting) vs. uneven-aged management silvicultural techniques (selection) on the National Forests. More and more, the public is expressing dissatisfaction with the application of clearcutting and other even-aged silvicultural techniques. Even with an understanding of the biological advantages or necessity of using such techniques, public opinion finds it to be a socially unacceptable practice on the National Forests. A shift away from even-aged management to uneven-aged management on the National Forests could potentially effect timber supply. In addition, it will also exacerbate the below-cost situation on many National Forests.

Sustaining the forests and rangelands for all their values and uses requires the perpetuation of diverse and healthy biological systems and conservation of soil and water productivity. Yields of resources are not sustainable unless the system that produces those yields is sustainable. Commodities and forest conditions will be produced at levels that are ecologically sustainable; ecosystem health and productivity will be maintained.

Implications for Marketing Zones

Northern Zone--Timber volume levels could be reduced by this issue; however, the extent of the affect is unknown at this time.

Southwestern Zone--Timber volume levels could be reduced by this issue; however, the extent of the affect is unknown at this time.

Southeastern Zone--Timber volume levels could be reduced by this issue; however, the extent of the affect is unknown at this time.

Log Transfers From the State of Idaho

Major log shortages are occurring in States neighboring Idaho. These log shortages have forced timber purchasers from outside Idaho to expand their range of operations to bid on and buy National Forest timber within the State of Idaho. This volume is then hauled to neighboring States for processing and milling. This additional demand on National Forest volume from outside the State places an additional burden on satisfying the needs of timber purchasers and mill owners within the State of Idaho.

Implications for Marketing Zones

Northern Zone--Both the Clearwater and Idaho Panhandle National Forests export volume out of the State. The Clearwater transfers about 12-15 MMBF out of State and the Idaho Panhandle transfers 15-20 MMBF out of State.

Southwestern Zone--The Boise National Forest projects that 2 MMBF will be transferred out of State annually. The Payette National Forest estimates that 8 MMBF is transferred out of State.

Southeastern Zone--The Caribou, Sawtooth and Targhee National Forests estimate that all of the timber harvested is consumed locally. The Challis estimates that 100 MBF are transferred out of State and the Salmon estimates that 10 MMBF (50 percent of program) are transferred out of State.

Old Growth Timber

Another emerging issue is that of "old growth" timber or "ancient forests". This issue is currently of National interest in Alaska, Washington, Oregon, and California. Although it has not yet affected timber harvest levels within the State of Idaho, it is an issue that will have to be addressed in the near future. A large component of the public feels that some portion of the National Forests should be set aside as "old growth forest preserves." If and

when this takes place, necessary adjustments will have to be made in ASQ's on National Forests.

The amount and location of old growth forests to be withdrawn or to be made available for timber harvesting is a subject of great debate, with the most conflict currently occurring in the Pacific Northwest. Environmental groups have asked for the protection of remaining ecologically significant old growth in the Northwest while new inventories and assessments are being completed. All of the national groups involved in this issue agreed to the compromise in the FY90 appropriations bill, which allowed some previously enjoined sales to go forward while directing that fragmentation of the most significant remaining old-growth areas be minimized. The bill's report language acknowledged that long-term solutions to the old growth controversy remain to be worked out.

In October 1989, the Chief issued by memo a position statement on old-growth forests and a generic definition for these forests. These will be published in the Federal Register for comment and will be incorporated in the Forest Service directives system. The statement acknowledges the many significant values associated with old growth, and addresses the need to provide these values for present and future generations. Decisions on managing existing old-growth forests will be made in the development and implementation of forest land management plans. The issue is also being addressed in the 1990 RPA Program (USDA Forest Service, 1990).

Ultimately some portion of the old growth timber in the State of Idaho will be preserved. With the preservation of this old growth timber, changes in the allowable sale quantities on the National Forests will take place.

Implications for Marketing Zones

Northern Zone--Timber volume levels for the Nez Perce National Forest will most likely be unaffected by this issue. However, the issue may significantly affect the Clearwater and Idaho Panhandle National Forests. In its monitoring during Forest plan implementation, the Clearwater National Forest has identified a potential shortage in old growth to meet Forest plan standards. The Clearwater National Forest is currently conducting an inventory to verify the actual amount of old growth in accordance with the existing Forest plan standards. The Idaho Panhandle National Forest recently reinventoried their old growth and found less than they had originally projected on the not suited lands. They will have to set aside more in the suited lands to meet their 10% Forest plan standard.

Southwestern Zone--Timber volume levels on the Payette may be affected by as much as 5 percent by this issue. The Boise National Forest expects no effect to occur.

Southeastern Zone--Timber volume levels could be affected by this issue. The Challis and Caribou predict significant decreases in timber harvest could occur as a result of this issue. The other National Forests predict little effect or are not certain of the effects of this issue.

Timber Sale Planning (Pipeline)

The timber sale planning process is essential to an orderly offering of timber for sale. This process is often called the "pipeline". Five years is required for a timber sale to flow thru the pipeline.

The pipeline is a series of steps or phases (gates) which an individual timber sale must pass through before it is finally harvested. The gates involved in the Forest Service timber sale process are:

GATE 1 -- Sale preparation activities begin with the identification of the purpose and need for a project, a preliminary identification of issues, management concerns, interested outside parties and resource opportunities. The output is a Position Statement signed by a line officer.

GATE 2 -- Gate 2 or the NEPA phase, is the sale area analysis and design. The output is a decision to proceed with the sale and a record of decision.

GATE 3 -- Gate 3 includes the on-the-ground activities to delineate timber to be sold, survey and design roads and gather data for the timber sale contract and appraisal.

GATE 4 -- This Gate includes the appraisal of the timber, preparation of the timber sale contract and advertisement of the timber sale to solicit bids.

GATE 5 -- Gate 5 is the bid opening and timber sale auction.

GATE 6 -- When the award requirements are met, the Contractor and the Forest Service sign the timber sale contract and Gate 6 is completed. The timber sale then moves from timber sale preparation to timber sale administration.

As policy, acceptable timber sale planning is defined as a pipeline which contains sufficient sale volumes to insure that out year budget requests are achievable. An acceptable pipeline means that all timber sales to be sold in a fiscal year are positioned in the pipeline with the field work completed at the end of the previous fiscal year.

Recently, the pipeline has been disrupted by appeals and litigation, fire damage (loss of sales burned in the fires and the loss of employee time due to fire assignments), decisions on NEPA process and changing land allocation which removed commercial forest land from the land base suitable for timber management.

Implications for Marketing Zones

Northern Zone--The disruptions in the pipeline appear to be significant for the National Forests in this Zone. The Nez Perce indicates that 70 MMBF are needed to fill the pipeline. The Clearwater estimates that there is a disruption of about 520 MMBF in the pipeline. The Idaho Panhandle National Forests indicate that 230 MMBF are needed to fill the pipeline.

Southwestern Zone--Timber supply levels on the Payette may be affected by as much as 81 MMBF due to difficulties encountered in completing EIS's for planned

timber harvests in roadless areas. The Boise National Forest expects that less than 5% of its program would be affected by pipeline shortages.

Southeastern Zone--Timber supply levels could be affected by this issue. The Challis National Forest expects some shortages (4 MMBF) to occur due to personnel changes and budget shortfalls. The Caribou predicts a possible shortfall of about 10 MMBF due to other resource considerations, inaccurate field data and bark beetle activity. The Salmon National Forest indicates that 20 MMBF are needed to solve pipeline problems. The Sawtooth National Forest has projected pipeline shortages of 12 MMBF. The Targhee National Forest needs 45 MMBF to fill its pipeline.

Water Quality/Fish Habitat Quality

Among the issues being addressed on National Forests in Idaho, none have had more effect and none have more potential for long term effect than the water quality and fish habitat quality issues. This is true from several angles. First, national forest management of the past provided for the development of extensive road networks which, quite candidly, were built without much regard for their effect on water quality, watershed stability, or the stream's inherent fish habitat. This has generally left the watersheds, water quality, and fish habitat of these currently roaded lands in a substandard condition when measured by the standards adopted in the Forest Plans. The primary management focus for these lands for the next several years must be general rehabilitation. Without the rehabilitation, timber management and yields from these lands will be substantially limited.

Second, the increasing regional and national interest in the anadromous fisheries expressed by the probable listing of the chinook salmon has brought increased awareness about the critical role that the National Forests need to play. In reality, the streams of the National Forests are the source of water quality and the provider of spawning habitat for the recovery and growth of anadromous fish populations for the Columbia River basin. This adds emphasis to the rehabilitation of the currently roaded lands and is significantly influencing the preparation of management plans for the unroaded lands in the state.

Third, intermingled private landowners while following state BMP's have typically not had much regard for the effect their activities may have on water and fish habitat quality. When national forest managers have, as required by the National Environmental Policy Act (NEPA), accounted for the cumulative effects of the private and the proposed national forest management activities, they have found they must usually temper their proposed management to mitigate for the private land activities and thereby stay within the level of quality adopted by the Forest Plans.

And finally, the timber industry's strong dependence on "traditional" approaches to timber harvest such as 1200-1500' EYD (External Yarding Distance) equipment and its associated road system instead of trying new and progressive techniques such as forwarders and improved long line equipment to achieve lower levels of impact on the water quality and fish habitat. Without a move in this direction, the national forest manager's options continue to be limited, particularly in the consideration of development in the roadless lands.

Implications for Marketing Zones

Northern Zone--Timber volume levels are substantially affected by this issue and all projections indicate the issue will increase in its impact for the next ten years at a minimum.

Southwestern Zone--Timber volume levels are affected by this issue and all projections indicate the issue will increase in its impact for the next ten years at a minimum.

Southeastern Zone--Timber volume levels are minimally affected by this issue and all projections indicate the issue will increase in its impact for the next ten years at a minimum.

Miscellaneous Forest Issues by Marketing Zone

Northern Zone--The Nez Perce National Forest has many specific issues that may affect future timber harvest levels. During the first three years of monitoring yield table information on the Nez Perce National Forest, a 24% overestimate in yield table projections was found. The Forest has found that elk habitat and threatened and endangered species considerations may reduce timber harvests. The estimates of riparian areas were also underestimated. The standards and guidelines in riparian areas are more restrictive than other suitable timber areas and could reduce total harvest levels. Yew bark extraction may also limit timber harvest. It has been determined that yew bark may provide a cure for certain types of cancer. If this cure is validated, demand for yew bark my increase significantly. The yew needs a shaded environment to flourish. Therefore, harvests of overstory may be restricted.

The Idaho Panhandle National Forest has also identified some issues that may affect timber supply. The identification of 100,000 acres of grizzly bear habitat, identified since the completion of the Forest Plan, will likely reduce planned timber supply. Fisheries habitat and water quality monitoring indicates that timber harvesting goals may not be compatible with the water quality goals of the Forest Plan. It is anticipated that restrictions on timber harvest will occur as a result of these findings. Harvesting and road building on lands within the Forest boundary of other ownership will reduce the amount of harvest on the National Forest due to cumulative effects on fish and wildlife habitat. Recent changes in ownership of lands within the Forest boundary will also reduce timber harvest levels.

The Clearwater National Forest likewise has found in its site-specific analyses that its harvest yields are being reduced by very similar issues.

Southwest Zone--The Payette National Forest has discovered that over estimation of productivity in Forest Plan yield estimates, underestimated restriction of Forest Plan standards and guidelines, and a recent land exchange for lands of lesser productivity may reduce timber supply levels by as much as 25-35 percent. In addition, the identification of several threatened and endangered species on the Forest may result in reduced harvests.

Southeast Zone--The possibility of listing the spring chinook salmon run has brought added scrutiny to the Challis National Forest timber program.

The Targhee National Forest has a unique situation which will significantly affect timber supply in the Southeastern Marketing Zone. The Targhee National Forest Land Management Plan was implemented in 1981, but not officially finalized and signed until we addressed the Roadless Area situation in 1985. One of the main objectives of that plan was to salvage lodgepole pine that had been killed by the pine bark beetle. The salvage operations could not wait for the completion of the Plan since much of the timber would deteriorate. The Forest began to implement the timber salvage objectives of the draft. In 1985 when the plan became final, five years of harvesting had already occurred from the harvest schedule that was identified in the Plan.

A Five Year Monitoring Report was released in June 1987. Because many of the objectives are close to being achieved, the amount of timber that can be supplied in years 11-15 of the Plan drops drastically. Consequently, the Targhee National Forest cannot sustain the levels of harvest of the past ten years, averaging 77.5 MMBF per year. Because of the intense effort to salvage dead lodgepole pine, we cannot stay within the standards and guidelines of the present plan.

The Forest is presently starting the process of plan revision, and anticipate that the Allowable Sale Quantity will decrease as follows:

FY 1991 -- 51.2 MMBF
FY 1992 -- 45.1 MMBF
FY 1993 -- 38.0 MMBF
FY 1994 -- 35.1 MMBF
FY 1995 -- 35.1 MMBF

They are implementing the above planned sell figures with the realization that as they progress with the revised Plan, the figures will change as they gather additional supportive data.

Summary Findings

Many issues relative to managing the National Forests either are or have the potential to impact timber supply. Individually these issues may not be significant, however, when evaluated cumulatively they could have significant impacts to timber harvest levels from the National Forests.

Several issues were examined that are impacting National Forest timber offer, sell, and harvest levels. They are:

-- Non-Interchangeable Components -- The non-interchangeable components (NIC's) of ASQ could potentially affect about 40 MMBF per year within the State of Idaho. The majority of volume impacted comes from the Northern and Southwestern Marketing Zones.

-- Costs of Preparing Environmental Analyses -- The costs, in dollars and people, of preparing environmental analyses and documents have significantly increased in recent years. This high cost is impacting all

National Forests and is putting a significant portion of volume at risk. Over 465 MMBF per year is potentially at risk within the State.

-- Roadless vs. Roaded Lands -- The controversy surrounding timber harvest in roadless areas is affecting all Forests, some significantly. Many Forests have reached their threshold levels in terms of harvesting timber in roaded areas and are now having to more heavily depend upon harvesting timber in roadless areas. Due to the high level of controversy surrounding harvesting in roadless areas, much of this volume is at risk. Approximately 230 MMBF per year is expected to come from roadless areas.

-- Mortality (Fire, Insect, & Disease) -- Due to severe drought conditions recently experienced in the State, an increase is mortality has occurred. This has occurred by large scale increases in fire, or increases in insect and disease due to the high stress conditions placed upon the trees by consecutive drought years. The amount of timber impacted by this situation is difficult to estimate, although Southern Idaho is expected to be the area most impacted.

-- Below-Cost Timber Sale Programs -- 4 of the 10 National Forests within the State of Idaho have timber sale programs that meet the Forest Service's definition of "below-cost". A proposed policy relative to below-cost timber sale program has recently been released for public review and comment. The exact consequences of implementing this policy and it's impact on timber supply within the State is not fully known at this time.

-- Clearcutting vs. Selection/Shelterwood Harvest Methods -- A shift away from clearcutting to shelterwood/selection silvicultural methods is taking place on all National Forests. This shift will obviously impact the amount of volume removed from any given acre of land, however the overall impact in terms of timber supply is unknown.

-- Log Transfers from the State of Idaho -- The transfer of logs to timber purchasers out of State is minimal at this time (although the trend appears to be growing). Only about 50 MMBF per year is flowing to sources out of the State of Idaho. There is concern, however, that harvest level were set on some National Forests for the purpose of providing some type of stability to local communities. This stability to the local communities cannot be achieved if a large portion of the timber were to flow out of the local area.

-- Old Growth Timber -- The definition of old growth and the total amount of old growth timber is not fully known and inventoried on most National Forests. The issue of old growth timber is likely to have some affect on timber supply over the long-term, however, the exact level of impact is not known at this time.

-- Timber Sale Planning (Pipeline) -- Disruptions in the timber sale planning process (pipeline) will be significant in many parts of the State. About 100 MMBF per year is needed to fill the pipeline to insure a smooth and steady flow of timber. The Northern part of the State is the ost impacted. Over 80 percent of the 100 MMBF is needed in the Northern Marketing Area to fill the pipeline.

-- Water Quality & Fish Habitat Quality -- Of the issues being addressed on the National Forests in Idaho, none have had more effect and none have more potential for long-term effect than the water quality and fish habitat quality issue. Although the exact impacts to future timber supply are unknown at this time, substantial amounts of timber volume could be impacted, especially in Northern and Southwestern Idaho.

-- Miscellaneous Forest Issues -- Local Forest level issues that may affect timber supply levels include inaccurate Forest Planning projections, conflicts in Forest Plan standards and guidelines, wildlife habitat for both T&E and other species, and changes in land ownership. One issue of major significance is the expected harvest levels on the Targhee National Forest. Many of the Forest plan objectives on this Forest have been achieved and consequently the amount of timber harvesting taking place must be reduced. Timber harvest levels on the Targhee National Forest are expected to drop by over 50 percent within the next 4 to 5 years.

OVERALL FINDINGS AND CONCLUSIONS

Northern Idaho -- Predictions made in the earlier (1987) timber supply study showed that, although Northern Idaho might have some minor supply problems in the future, the outlook appeared pretty good. Given what we have learned since that time, and given the many issues we are now facing on the National Forests, we now feel that the earlier prediction was inordinately optimistic. Given the issues that need to be addressed on the Northern Idaho Forests, the ability to maintain current ASQ levels is in jeopardy, much less the anticipated increases in timber volume in the future. Given that the probability for anticipated increases in timber volume in the future, as depicted in the Forest plans appears to be extremely low, a scenario or graphic evaluation of the consequences was performed. This graphic depiction can be seen in Figure 12 below.

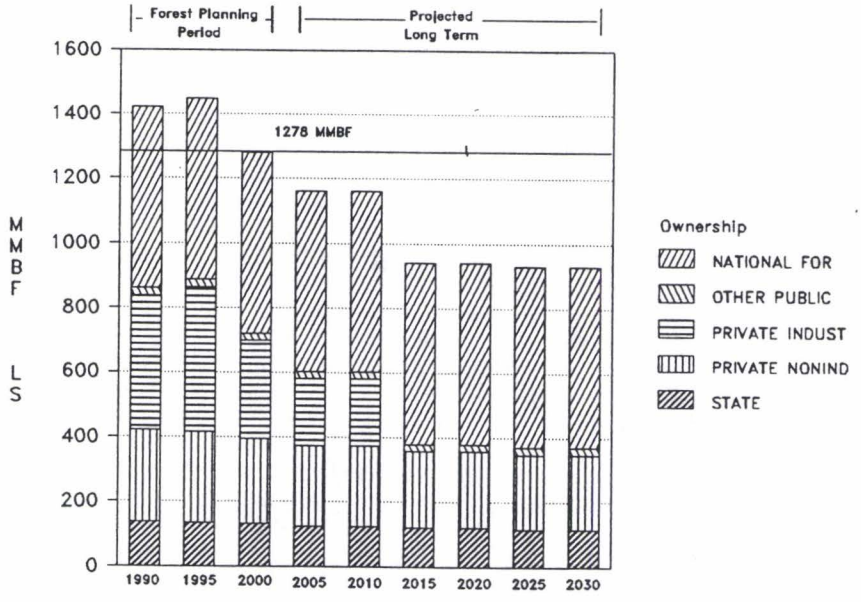


Figure 12. -- Projected Harvest by Ownership Class Without Increases in Future Volumes From National Forests (Northern Idaho).

In depicting the scenario that ASQ levels can be sustained over time (with no increases in the future), large short-falls in timber supply are expected as early as the year 2005, with even more significant drops in the year 2015. The Northern Idaho marketing area is the most significantly impacted in the State. It should be noted that the above graphic depiction is believed to be an overly optimistic prediction in terms of volume levels from the National Forests.

Southwestern Idaho -- Predictions made in the earlier (1987) timber supply study showed that Southwestern Idaho would experience some supply problems in the future. The Payette and Boise National Forests take some actions between their draft and final plans to respond to the issue. Predictions made in the earlier study are still considered to be valid, although the Forests within this marketing zone face many challenges in dealing with the current issues and meeting their expected ASQ levels. The Southwestern Idaho marketing area is expected to be the most minimally impacted in the State.

Southeastern Idaho -- Predictions made in the earlier (1987) timber supply study showed that Southeastern Idaho would experience only minor supply problems in the future. Reductions in timber harvest levels were expected on the Targhee National Forest in particular. The basic premise of the predictions made in the earlier study are still considered to be valid, however, the reductions expected on the Targhee National Forest are anticipated to be larger in scale than anticipated earlier. The timing of the reductions is also occurring at a faster rate than previously expected. In addition, the other National Forests within this marketing zone face many challenges in dealing with the current issues and meeting their expected ASQ levels. The Southeastern Idaho marketing area is expected to be much more impacted than originally predicted.

Based upon the anticipated reductions in timber volume levels from the Targhee National Forest, a scenario or graphic evaluation of the consequences for Southern Idaho was performed. This graphic depiction can be seen in Figure 13 below.

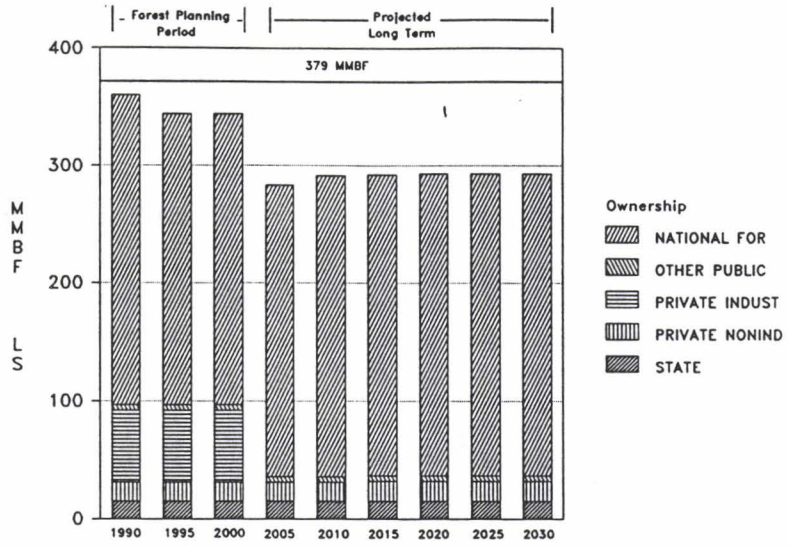


Figure 13. -- Projected Harvest by Ownership Class Based Upon Anticipated Reductions from the Targhee National Forest (Southern Idaho).

Again, it should be noted that the above graphic depiction is believed to be an overly optimistic prediction in terms of volume levels from the National Forests.

Although the above findings and conclusions are significant in terms of their impacts to future timber supply levels within the State of Idaho, the authors of this report do not want to imply that this equates to inappropriate management of National Forests. The actions that are currently being taken by the Forest Service, and the actions that may potentially take place in the future by the Forest Service, which result in reduced harvest levels may be appropriate and proper management of the National Forests.

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APPENDIX A

IDAHO TIMBER HARVEST SUMMARY

		CALENDAR YEARS										
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	Change 1988-1989
USDA Forest Service[1]	MBF	602,755	625,111	382,587	653,630	654,926	642,549	692,740	721,610	668,864	746,373	+11.6%
	% of Subtotal	37.2	40.9	33.7	41.5	37.6	42.8	44.0	43.5	41.7	40.4	
Bureau of Indian Affairs[2]	MBF	4,486	8,646	10,900	19,171	17,470	14,080	12,230	18,904	16,200	13,450	-17.0%
	% of Subtotal	0.3	0.6	1.0	1.2	1.0	0.9	0.8	1.1	1.0	0.7	
Bureau of Land Managemt.[3]	MBF	15,885	18,900	17,652	21,771	13,324	24,389	22,810	18,862	13,565	16,407	+20.9%
	% of Subtotal	1.0	1.2	1.6	1.4	0.8	1.6	1.4	1.1	0.8	0.9	
State of Idaho[4]	MBF	140,779	149,475	82,294	154,974	197,542	170,400	161,772	176,671	208,372	249,471	+19.7%
	% of Subtotal	8.7	9.8	7.2	9.8	11.3	11.4	10.3	10.7	13.0	13.5	
All private Idaho[4]	MBF	857,597	727,672	642,222	726,969	860,757	646,235	684,000	722,162	697,536	819,719	+17.5%
	% of Subtotal	52.9	47.6	56.6	46.1	49.4	43.2	43.5	43.6	43.5	44.4	
Subtotal	MBF	1,621,502	1,529,804	1,135,655	1,576,515	1,744,019	1,497,653	1,573,552	1,658,209	1,604,537	1,845,420	+15.0%
Fuelwood[5]	MBF	3,214	32,650	62,242	126,618	32,827	94,046	81,928	66,789	56,327	63,829	+13.3%
Total	MBF	1,624,716	1,562,454	1,197,897	1,703,133	1,776,846	1,591,699	1,655,480	1,724,998	1,660,864	1,909,249	+15.0%

[1] USDA Forest Service, Missoula, Montana and Ogden, Utah.
[2] Bureau of Indian Affairs, Portland, Oregon and Plummer, Idaho.
[3] Bureau of Land Management, Coeur d'Alene, and Boise, Idaho.
[4] Idaho Department of Lands, Coeur d'Alene, Idaho.
[5] Represents volume of fuelwood collected from National Forests in Idaho. The free-use policy and record keeping system for fuelwood was changed in 1983.

NORTH IDAHO TIMBER HARVEST[1]

		CALENDAR YEARS										
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	Change 1988-1989
USDA Forest Service[2]	MBF	410,310	417,370	244,388	435,190	395,582	402,332	421,243	454,924	382,680	493,629	+29.0%
	% of Subtotal	31.6	33.6	26.8	34.9	28.6	34.7	35.2	35.3	31.1	33.6	
Bureau of Indian Affairs[3]	MBF	4,486	8,646	10,900	19,171	17,470	14,080	12,230	18,904	16,200	13,450	-17.0%
	% of Subtotal	0.3	0.7	1.2	1.5	1.3	1.2	1.0	1.5	1.3	0.9	
Bureau of Land Managemt.[4]	MBF	8,500	13,000	15,000	18,000	12,000	13,400	16,200	15,400	12,500	13,800	+10.4%
	% of Subtotal	0.7	1.0	1.6	1.4	0.9	1.2	1.4	1.2	1.0	0.9	
State of N. Idaho[5]	MBF	129,088	130,810	71,099	146,986	169,254	155,460	132,408	151,506	171,944	216,818	+26.1%
	% of Subtotal	9.9	10.5	7.8	11.8	12.2	13.4	11.1	11.7	14.0	14.8	
All private N. Idaho[5]	MBF	747,430	672,054	568,882	628,645	789,065	573,210	615,000	648,683	646,879	730,335	+12.9%
	% of Subtotal	57.5	54.1	62.5	50.4	57.0	49.5	51.4	50.3	52.6	49.7	
Subtotal	MBF	1,299,814	1,241,880	910,269	1,247,992	1,383,371	1,158,482	1,197,081	1,289,417	1,230,203	1,468,032	+19.3%
Fuelwood[6]	MBF	3,214	3,902	4,498	56,757	32,827	29,674	30,388	25,093	19,585	20,027	+ 2.3%
Total	MBF	1,303,028	1,245,782	914,767	1,304,749	1,416,198	1,188,156	1,227,469	1,314,510	1,249,788	1,488,059	+19.1%

[1] North Idaho - 10 counties north of the Salmon River.
[2] USDA Forest Service, Missoula, Montana
[3] Bureau of Indian Affairs, Plummer, Idaho.
[4] Bureau of Land Management, Coeur d'Alene, Idaho.
[5] Idaho Department of Lands, Coeur d'Alene, Idaho.
[6] Represents volumes of fuelwood collected from National Forests in North Idaho. The free-use policy and recordkeeping system for fuelwood was changed in 1983.

SOUTH IDAHO TIMBER HARVEST[1]

		CALENDAR YEARS										
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	Change 1988-1989
USDA Forest Service[2]	MBF	192,445	207,741	138,199	218,440	259,344	240,217	271,497	266,686	286,184	252,744	-11.7%
	% of Subtotal	59.8	72.2	61.3	66.5	71.9	70.6	72.1	72.3	76.5	67.0	
Bureau of Indian Affairs[3]	MBF	0	0	0	0	0	0	0	0	0	0	0
	% of Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bureau of Land Managemt.[4]	MBF	7,385	5,900	2,652	3,771	1,324	10,989	6,610	3,462	1,065	2,607	+144.8%
	% of Subtotal	2.3	2.0	1.2	1.1	0.4	3.3	1.8	0.9	0.3	0.7	
State of S. Idaho[5]	MBF	11,691	18,665	11,195	7,988	28,288	14,940	29,364	25,165	36,428	32,653	-10.4%
	% of Subtotal	3.6	6.5	5.0	2.4	7.8	4.4	7.8	6.8	9.7	8.6	
All private S. Idaho[5]	MBF	110,167	55,618	73,340	98,324	71,692	73,025	69,000	73,479	50,657	89,384	+76.4%
	% of Subtotal	34.2	19.3	32.5	29.9	19.9	21.7	18.3	19.9	13.5	23.7	
Subtotal	MBF	321,688	287,924	225,386	328,523	360,648	339,171	376,471	368,792	374,334	377,388	+ 0.8%
Fuelwood[6]		NA	28,748	57,744	69,861	NA	64,372	51,540	41,696	36,742	43,802	+19.2%
Total	MBF	321,688	316,672	283,130	398,384	360,648	403,543	428,011	410,488	411,076	421,190	+ 2.5%

[1] South Idaho - 34 counties south of the Salmon River.
[2] USDA Forest Service, Ogden, Utah.
[3] Bureau of Indian Affairs, Portland, Oregon.
[4] Bureau of Land Management, Boise, Idaho.
[5] Idaho Department of Lands, Coeur d'Alene, Idaho.
[6] Represents volumes of fuelwood collected from National Forests in South Idaho.

APPENDIX B

NEW TIMBER SUPPLY PROJECTIONS BASED UPON FINAL FOREST PLAN PROJECTIONS
(Average MMBF/Year)

	1990	1995	2000	2005	2010	2015	2020	2025	2030
Northern Idaho:									
National Forests	561	561	700	700	854	854	1,016	1,016	1,150
Other Public	24	23	22	22	22	21	21	22	22
State Lands	138	135	132	125	125	120	120	117	117
Private Industrial	415	448	305	206	206	0	0	0	0
Non-industrial Private	284	282	262	248	248	238	238	231	231
Northern Idaho Total	1,422	1,449	1,421	1,301	1,455	1,233	1,395	1,386	1,520
Southern Idaho:									
National Forests	282	282	271	271	269	269	272	272	278
Other Public	5	5	5	5	5	5	5	5	5
State Lands	15	15	15	15	15	15	15	15	15
Private Industrial	61	61	61	0	0	0	0	0	0
Non-industrial Private	16	16	16	16	16	17	17	17	17
Southern Idaho Total	379	379	368	307	305	306	309	309	315
Statewide Total	1,801	1,828	1,789	1,608	1,760	1,539	1,704	1,695	1,835
Southwestern Idaho:									
National Forests	164	164	157	157	156	156	158	158	161
Other Public	4	4	4	4	4	4	4	4	4
State Lands	12	12	12	12	12	12	12	12	12
Private Industrial	61	61	61	0	0	0	0	0	0
Non-industrial Private	16	16	16	16	16	16	16	16	16
Southwestern Idaho Total	257	257	250	189	188	189	191	191	194
Southeastern Idaho:									
National Forests	118	118	114	114	113	113	114	114	117
Other Public	1	1	1	1	1	1	1	1	1
State Lands	3	3	3	3	3	3	3	3	3
Private Industrial	0	0	0	0	0	0	0	0	0
Non-industrial Private	0	0	0	0	0	1	1	1	1
Southeastern Idaho Total	122	122	118	118	117	117	118	118	121

APPENDIX C

TIMBER VOLUME OFFERED:

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	10 Yr Av	Pct ASQ	ASQ
Northern Idaho:													
__Clearwater	158.4	157.1	157.0	154.9	165.9	160.7	140.7	138.1	137.5	146.6	151.7	88%	173.0
__Idaho Panhandle	317.7	273.7	271.8	295.0	275.2	262.2	260.8	250.7	256.0	229.3	269.2	96%	280.0
__NezPerce	106.7	104.8	95.0	70.2	100.8	89.6	91.2	100.4	104.6	105.0	96.8	90%	108.0
__Subtotal:	582.8	535.6	523.8	520.1	541.9	512.5	492.7	489.2	498.1	480.9	517.8	92%	561.0
Southwestern Idaho:													
__Boise	67.5	76.5	108.4	98.7	106.0	82.3	104.8	87.2	100.2	97.9	93.0	109%	85.0
__Payette	61.0	77.3	70.5	56.2	48.5	77.3	87.4	79.6	74.7	85.0	71.8	89%	80.9
__Subtotal:	128.5	153.8	178.9	154.9	154.5	159.6	192.2	166.8	174.9	182.9	164.7	99%	165.9
Southeastern Idaho:													
__Caribou	19.5	22.4	21.3	21.3	17.7	16.3	24.2	10.4	13.3	9.2	17.6	167%	10.5
__Challis	4.4	7.3	2.8	3.2	4.5	5.1	4.7	3.9	2.5	6.8	4.5	151%	3.0
__Salmon	37.9	38.9	28.8	16.4	33.6	20.3	24.9	22.6	16.6	23.3	26.3	122%	21.6
__Sawtooth	10.0	21.7	24.0	21.7	20.5	10.2	6.2	11.0	11.8	0.1	13.7	131%	10.5
__Targhee	80.0	88.0	76.1	80.3	73.7	78.5	75.3	77.2	73.5	78.3	78.1	111%	70.1
__Subtotal:	151.8	178.3	153.0	142.9	150.0	130.4	135.3	125.1	117.7	117.7	140.2	121%	115.7
Idaho Total:	863.1	867.7	855.7	817.9	846.4	802.5	820.2	781.1	790.7	781.5	822.7	98%	842.6

TIMBER VOLUME SOLD:

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	10 Yr Av	Pct ASQ	ASQ
Northern Idaho:													
__Clearwater	153.3	141.0	100.8	149.1	117.8	148.7	110.8	134.7	119.9	148.1	132.4	77%	173.0
__Idaho Panhandle	317.2	272.0	249.6	262.1	261.9	181.3	204.2	237.1	261.9	250.8	249.8	89%	280.0
__NezPerce	102.3	53.4	98.6	82.1	58.3	66.2	90.5	92.6	112.2	77.8	83.4	77%	108.0
__Subtotal:	572.8	466.4	449.0	493.3	438.0	396.2	405.5	464.4	494.0	476.7	465.6	83%	561.0
Southwestern Idaho:													
__Boise	68.4	58.2	81.0	67.6	88.7	77.1	100.4	68.3	69.1	82.4	76.1	90%	85.0
__Payette	61.0	57.6	66.3	53.9	62.8	77.1	86.9	79.6	73.7	77.0	69.6	86%	80.9
__Subtotal:	129.4	115.8	147.3	121.5	151.5	154.2	187.3	147.9	142.8	159.4	145.7	88%	165.9
Southeastern Idaho:													
__Caribou	19.5	22.3	18.0	21.0	9.4	7.9	24.2	14.7	13.5	16.2	16.7	159%	10.5
__Challis	5.1	7.3	2.6	2.1	3.0	4.3	5.9	4.3	2.0	6.7	4.3	144%	3.0
__Salmon	38.7	25.2	16.3	16.4	9.2	9.3	40.4	20.9	21.1	22.1	22.0	102%	21.6
__Sawtooth	10.3	13.0	21.7	20.9	14.3	13.9	10.2	10.6	7.5	9.4	13.2	126%	10.5
__Targhee	78.8	46.1	53.3	71.3	71.4	77.8	74.9	66.9	83.0	70.3	69.4	99%	70.1
__Subtotal:	152.4	113.9	111.9	131.7	107.3	113.2	155.6	117.4	127.1	124.7	125.5	108%	115.7
Idaho Total:	854.6	696.1	708.2	746.5	696.8	663.6	748.4	729.7	763.9	760.8	736.9	87%	842.6

TIMBER VOLUME HARVESTED:

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	10 Yr Av	Pct ASQ	ASQ
Northern Idaho:													
__Clearwater	112.1	170.0	88.1	157.8	146.6	89.1	121.7	142.3	99.0	120.4	124.7	72%	173.0
__Idaho Panhandle	236.7	235.3	145.0	257.7	228.9	240.0	244.8	248.6	252.8	263.1	235.3	84%	280.0
__NezPerce	65.9	86.0	23.3	43.7	56.0	122.5	96.1	89.1	72.9	99.5	75.5	70%	108.0
__Subtotal:	414.7	491.3	256.4	459.2	431.5	451.6	462.6	480.0	424.7	483.0	435.5	78%	561.0
Southwestern Idaho:													
__Boise	73.9	70.2	47.9	76.0	58.5	104.7	87.0	113.2	106.4	90.1	82.8	97%	85.0
__Payette	38.9	59.4	20.0	60.0	67.8	68.3	93.4	81.4	83.7	85.3	65.8	81%	80.9
__Subtotal:	112.8	129.6	67.9	136.0	126.3	173.0	180.4	194.6	190.1	175.4	148.6	90%	165.9
Southeastern Idaho:													
__Caribou	16.6	19.6	13.6	21.9	16.8	23.2	9.3	16.0	14.7	16.2	16.8	160%	10.5
__Challis	4.7	8.5	0.4	5.4	2.2	4.6	3.0	3.8	4.4	3.2	4.0	134%	3.0
__Salmon	16.1	14.3	9.8	16.2	9.9	9.3	40.2	14.7	21.9	21.6	17.4	81%	21.6
__Sawtooth	10.2	13.0	13.6	17.4	18.3	17.8	16.7	10.9	10.2	9.6	13.8	131%	10.5
__Targhee	74.2	76.4	73.0	66.5	6.6	85.6	75.1	84.6	101.6	91.7	73.5	105%	70.1
__Subtotal:	121.8	131.8	110.4	127.4	53.8	140.5	144.3	130.0	152.8	142.3	125.5	108%	115.7
Idaho Total:	649.3	752.7	434.7	722.6	611.6	765.1	787.3	804.6	767.6	800.7	709.6	84%	842.6

TIMBER VOLUME UNDER CONTRACT:

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	10 Yr Av	Pct ASQ	ASQ
Northern Idaho:													
__Clearwater	526.3	464.3	464.0	463.1	476.2	515.3	503.5	393.0	388.5	422.3	461.7	267%	173.0
__Idaho Panhandle	846.1	952.9	1022.0	1010.3	1094.8	1065.3	856.7	740.4	697.7	661.4	894.8	320%	280.0
__NezPerce	304.6	276.4	347.6	375.5	383.8	289.3	283.9	235.9	290.0	243.6	303.1	281%	108.0
__Subtotal:	1677.0	1693.6	1833.6	1848.9	1954.8	1869.9	1644.1	1369.3	1376.2	1327.3	1659.5	296%	561.0
Southwestern Idaho:													
__Boise	253.8	222.6	253.6	256.6	299.4	262.6	272.7	239.7	197.4	184.3	244.3	287%	85.0
__Payette	188.2	197.3	241.2	236.0	219.0	239.6	226.1	231.3	207.8	230.8	221.7	274%	80.9
__Subtotal:	442.0	419.9	494.8	492.6	518.4	502.2	498.8	471.0	405.2	415.1	466.0	281%	165.9
Southeastern Idaho:													
__Caribou	14.4	17.6	19.7	22.5	15.6	8.5	22.2	19.5	13.1	14.3	16.7	159%	10.5
__Challis	9.6	7.2	7.1	6.5	5.2	6.9	8.8	7.8	6.2	9.8	7.5	250%	3.0
__Salmon	64.7	0.7	83.0	83.0	77.9	40.0	12.0	15.9	17.6	17.3	41.2	191%	21.6
__Sawtooth	31.7	5.9	12.0	15.3	20.4	11.0	7.5	8.2	5.2	3.8	12.1	115%	10.5
__Targhee	256.8	194.1	117.0	142.0	172.5	145.4	117.0	90.0	34.1	16.1	128.5	183%	70.1
__Subtotal:	377.2	225.5	238.8	269.3	291.6	211.8	167.5	141.4	76.2	61.3	206.1	178%	115.7
Idaho Total:	2496.2	2339.0	2567.2	2610.8	2764.8	2583.9	2310.4	1981.7	1857.6	1803.7	2331.5	277%	842.6

APPENDIX D

TIMBER VOLUME (Chargeable - Nonchargeable):

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	10 Yr Av	Pct ASQ	ASQ
Clearwater:													
__Chargeable	61.7	115.6	59.9	112.0	101.2	71.3	94.9	129.5	88.1	116.8	95.1	55%	173.0
__Nonchargeable	50.4	54.4	28.2	45.8	45.4	17.8	26.8	12.8	10.9	3.6	29.6	17%	173.0
__Total	112.1	170.0	88.1	157.8	146.6	89.1	121.7	142.3	99.0	120.4	124.7	72%	173.0
Idaho Panhandle:													
__Chargeable	187.0	197.7	126.2	208.7	201.4	196.8	181.2	213.8	237.6	252.6	200.3	72%	280.0
__Nonchargeable	49.7	37.6	18.8	49.0	27.5	43.2	63.6	34.8	15.2	10.5	35.0	12%	280.0
__Total	236.7	235.3	145.0	257.7	228.9	240.0	244.8	248.6	252.8	263.1	235.3	84%	280.0
NezPerce:													
__Chargeable	56.7	67.1	21.7	42.0	51.5	107.8	92.3	87.3	70.7	98.5	69.6	64%	108.0
__Nonchargeable	9.2	18.9	1.6	1.7	4.5	14.7	3.8	1.8	2.2	1.0	5.9	6%	108.0
__Total	65.9	86.0	23.3	43.7	56.0	122.5	96.1	89.1	72.9	99.5	75.5	70%	108.0
Northern Idaho:													
__Chargeable	305.4	380.4	207.8	362.7	354.1	375.9	368.4	430.6	396.4	467.9	365.0	65%	561.0
__Nonchargeable	109.3	110.9	48.6	96.5	77.4	75.7	94.2	49.4	28.3	15.1	70.5	13%	561.0
__Total	414.7	491.3	256.4	459.2	431.5	451.6	462.6	480.0	424.7	483.0	435.5	78%	561.0
Boise:													
__Chargeable	66.5	63.2	43.1	68.4	52.6	94.2	78.3	101.9	95.8	81.1	74.5	88%	85.0
__Nonchargeable	7.4	7.0	4.8	7.6	5.9	10.5	8.7	11.3	10.6	9.0	8.3	10%	85.0
__Total	73.9	70.2	47.9	76.0	58.5	104.7	87.0	113.2	106.4	90.1	82.8	97%	85.0
Payette:													
__Chargeable	35.0	53.5	18.0	54.0	61.0	61.5	84.1	73.3	75.3	76.8	59.3	73%	80.9
__Nonchargeable	3.9	5.9	2.0	6.0	6.8	6.8	9.3	8.1	8.4	8.5	6.6	8%	80.9
__Total	38.9	59.4	20.0	60.0	67.8	68.3	93.4	81.4	83.7	85.3	65.8	81%	80.9
Southwestern Idaho:													
__Chargeable	101.5	116.7	61.1	122.4	113.6	155.7	162.4	175.2	171.1	157.9	133.8	81%	165.9
__Nonchargeable	11.3	12.9	6.8	13.6	12.7	17.3	18.0	19.4	19.0	17.5	14.9	9%	165.9
__Total	112.8	129.6	67.9	136.0	126.3	173.0	180.4	194.6	190.1	175.4	148.6	90%	165.9
Caribou:													
__Chargeable	14.9	17.6	12.2	19.7	15.1	20.9	8.4	14.4	13.2	14.6	15.1	144%	10.5
__Nonchargeable	1.7	2.0	1.4	2.2	1.7	2.3	0.9	1.6	1.5	1.6	1.7	16%	10.5
__Total	16.6	19.6	13.6	21.9	16.8	23.2	9.3	16.0	14.7	16.2	16.8	160%	10.5
Challis:													
__Chargeable	4.2	7.6	0.4	4.9	2.0	4.1	2.7	3.4	4.0	2.9	3.6	121%	3.0
__Nonchargeable	0.5	0.9	0.0	0.5	0.2	0.5	0.3	0.4	0.4	0.3	0.4	13%	3.0
__Total	4.7	8.5	0.4	5.4	2.2	4.6	3.0	3.8	4.4	3.2	4.0	134%	3.0
Salmon:													
__Chargeable	14.5	12.9	8.8	14.6	8.9	8.4	36.2	13.2	19.7	19.4	15.7	73%	21.6
__Nonchargeable	1.6	1.4	1.0	1.6	1.0	0.9	4.0	1.5	2.2	2.2	1.7	8%	21.6
__Total	16.1	14.3	9.8	16.2	9.9	9.3	40.2	14.7	21.9	21.6	17.4	81%	21.6
Sawtooth:													
__Chargeable	9.2	11.7	12.2	15.7	16.5	16.0	14.9	9.8	9.2	8.6	12.4	118%	10.5
__Nonchargeable	1.0	1.3	1.4	1.7	1.8	1.8	1.8	1.1	1.0	1.0	1.4	13%	10.5
__Total	10.2	13.0	13.6	17.4	18.3	17.8	16.7	10.9	10.2	9.6	13.8	131%	10.5
Targhee:													
__Chargeable	66.8	68.8	65.7	59.8	5.9	77.0	67.6	76.1	91.4	82.5	66.2	94%	70.1
__Nonchargeable	7.4	7.6	7.3	6.7	0.7	8.6	7.5	8.5	10.2	9.2	7.4	11%	70.1
__Total	74.2	76.4	73.0	66.5	6.6	85.6	75.1	84.6	101.6	91.7	73.5	105%	70.1
Southeastern Idaho:													
__Chargeable	109.6	118.6	99.3	114.7	48.4	126.4	129.8	116.9	137.5	128.0	112.9	98%	115.7
__Nonchargeable	12.2	13.2	11.1	12.7	5.4	14.1	14.5	13.1	15.3	14.3	12.6	11%	115.7
__Total	121.8	131.8	110.4	127.4	53.8	140.5	144.3	130.0	152.8	142.3	125.5	108%	115.7
State of Idaho:													
__Chargeable	516.5	615.7	368.2	599.8	516.1	658.0	660.6	722.7	705.0	753.8	611.6	73%	842.6
__Nonchargeable	132.8	137.0	66.5	122.8	95.5	107.1	126.7	81.9	62.6	46.9	98.0	12%	842.6
__Grand Total	649.3	752.7	434.7	722.6	611.6	765.1	787.3	804.6	767.6	800.7	709.6	84%	842.6

APPENDIX E

SUITED AREA AND ASQ VOLUME AT RISK BY QUANTIFIABLE ISSUES

MARKETING ZONE/ NATIONAL FOREST	NIC's 1/		HIGH NEPA COSTS			ROADLESS AREAS 2/		VOLUME NEEDED TO FILL PIPELINE		ANNUAL LOG TRANSFERS
	ACRES	VOLUME (MMBF)	PREVIOUS COST/MBF	PROJECTED COST/MBF	VOLUME AT RISK (MMBF)	SUITED LAND ACRES	SAWT. ASQ VOL. (MMBF)	ACRES	VOLUME (MMBF)	VOLUME (MMBF)
NORTHERN										
CLEARWATER	478,000	100	$13.00	$17.00	1,730.0	510,000	730.0	300,000	520.0	12.0-15.0
NEZ PERCE	911,669	50	$ 1.75	$6.00-8.00	390.0	269,000	290.0	4,100	70.0	0
PANHANDLE	429,400	54	$12.00	$45.00	2,000.0	429,000	550.0	15,000	230.0	15.0-20.0
SUBTOTAL:	1,819,069	204			4,120.0	1,208,000	1,570.0	319,100	820.0	27.0-35.0
SOUTHWEST										
BOISE	55,150	92	$20.00	$40.00	73.5	262,000	200.0	0	0	2.0
PAYETTE	97,871	86	$14.00	$28.00	299.0	110,000	241.0	8,000	81.0	8.0
SUBTOTAL:	153,021	178			372.5	372,000	441.0	8,000	81.0	10.0
SOUTHEAST										
CARIBOU	N/A	N/A	$ 2.50	$12.50	10.0	91,000	79.9	1,740	10.5	0
CHALLIS	N/A	N/A	$8.00-10.00	$20.00	7.0	50,000	5.0	2,100	4.0	.1
SALMON	N/A	N/A	$13.00	$23.00	80.0	260,000	118.0	4,000	20.0	10.0
SAWTOOTH	20,664	15	$ 2.50	$ 7.50	50.0	44,500	50.0	2,000	12.0	0
TARGHEE	N/A	N/A	$2.50-3.00	$ 7.25+	10.0	41,000	40.0	7,500	45.1	0
SUBTOTAL:	20,664	15			157.0	486,500	292.9	17,340	91.6	10.1
TOTAL - ALL ZONES	1,991,754	397			4,649.5	2,066,500	2,303.9	344,440	992.6	47.1-55.1

1/ Includes only those areas and/or volume yields "added" to the base ASQ to help offset projected supply shortfalls identified by the 1987 Timber Supply Report

2/ Values are Forest Plan totals (from information provided earlier by all Forests in reference to this issue)

APPENDIX F

NATIONAL FORESTS IN THE STATE OF IDAHO

ALLOWABLE SALE QUANTITIES (DECADAL) IN ROADED AND UNROADED AREAS
(SAWTIMBER ONLY)

MARKETING ZONE/ NATIONAL FOREST	SAWTIMBER VOLUME - MMBF										
	ROADED AREAS				UNROADED AREAS				TOTAL FLRMP DECADAL ASQ		
	GREEN	SALVAGE	TOTAL	PERCENT ROADED	GREEN	SALVAGE	TOTAL	PERCENT UNROADED	GREEN	SALVAGE	TOTAL
NORTHERN											
CLEARWATER	1,000.0 (100%)	-	1,000.0 (100%)	58%	730.0 (100%)	-	730.0 (100%)	42%	1,730.0 (100%)	-	1,730.0 (100%)
NEZ PERCE	630.0 (85%)	110.0 (15%)	740.0 (100%)	72%	180.0 (62%)	110.0 (38%)	290.0 (100%)	28%	810.0 (79%)	220.0 (21%)	1,030.0 (100%)
PANHANDLE	2,050.0 (90%)	200.0 (10%)	2,250.0 (100%)	80%	500.0 (90%)	50.0 (10%)	550.0 (100%)	20%	2,550.0 (90%)	250.0 (10%)	2,800.0 (100%)
SUBTOTAL:	3,680.0 (92%)	310.0 (8%)	3,990.0 (100%)	72%	1,410.0 (90%)	160.0 (10%)	1,570.0 (100%)	28%	5,090.0 (92%)	470.0 (8%)	5,560.0 (100%)
SOUTHWEST											
BOISE	650.0 (100%)	-	650.0 (100%)	76%	200.0 (100%)	-	200.0 (100%)	24%	850.0 (100%)	-	850.0 (100%)
PAYETTE	377.0 (66%)	191.0 (34%)	568.0 (100%)	70%	177.0 (73%)	64.0 (27%)	241.0 (100%)	30%	554.0 (68%)	255.0 (32%)	809.0 (100%)
SUBTOTAL:	1,027.0 (84%)	191.0 (16%)	1,218.0 (100%)	73%	377.0 (85%)	64.0 (15%)	441.0 (100%)	27%	1,404.0 (85%)	255.0 (15%)	1,659.0 (100%)
SOUTHEAST											
CARIBOU	22.5 (90%)	2.6 (10%)	25.1 (100%)	24%	71.5 (89%)	8.4 (11%)	79.9 (100%)	76%	94.0 (90%)	11.0 (10%)	105.0 (100%)
CHALLIS	25.0 (100%)	-	25.0 (100%)	83%	5.0 (100%)	-	5.0 (100%)	17%	30.0 (100%)	-	30.0 (100%)
SALMON	88.0 (95%)	5.0 (5%)	93.0 (100%)	44%	112.0 (95%)	6.0 (5%)	118.0 (100%)	56%	200.0 (95%)	11.0 (5%)	211.0 (100%)
SAWTOOTH	11.5 (88%)	1.5 (12%)	13.0 (100%)	21%	40.0 (80%)	10.0 (20%)	50.0 (100%)	79%	51.5 (82%)	11.5 (18%)	63.0 (100%)
TARGHEE	204.0 (85%)	36.0 (15%)	240.0 (100%)	86%	34.0 (85%)	6.0 (15%)	40.0 (100%)	14%	238.0 (85%)	42.0 (15%)	280.0 (100%)
SUBTOTAL:	351.0 (89%)	45.1 (11%)	396.1 (100%)	57%	262.5 (90%)	30.4 (10%)	292.9 (100%)	43%	613.5 (89%)	75.5 (11%)	689.0 (100%)
TOTAL - ALL FORESTS	5,058.0 (90%)	546.1 (10%)	5,604.1 (100%)	71%	2,049.5 (89%)	254.4 (11%)	2,303.9 (100%)	29%	7,107.5 (90%)	800.5 (10%)	7,908.0 (100%)

APPENDIX G

TSPIRS INFORMATION:

	Fiscal Year			
	1988	1989	1990	3 Yr Av
Clearwater:				
__Revenues	$6,324	$9,507	$13,101	$9,644
__Costs	$6,576	$8,007	$9,877	$8,153
__Net Return	($252)	$1,500	$3,224	$1,491
Idaho Panhandle:				
__Revenues	$22,186	$24,748	$26,450	$24,461
__Costs	$13,406	$14,278	$17,041	$14,908
__Net Return	$8,780	$10,470	$9,409	$9,553
NezPerce:				
__Revenues	$4,499	$7,270	$6,837	$6,202
__Costs	$4,206	$5,850	$6,161	$5,406
__Net Return	$293	$1,420	$676	$796
Northern Idaho:				
__Revenues	$33,009	$41,525	$46,388	$12,092
__Costs	$24,188	$28,135	$33,079	$8,540
__Net Return	$8,821	$13,390	$13,309	$11,840
Boise:				
__Revenues	$5,985	$4,673	$7,100	$5,919
__Costs	$5,400	$4,798	$5,305	$5,168
__Net Return	$585	($125)	$1,795	$752
Payette:				
__Revenues	$5,454	$7,891	$8,438	$7,261
__Costs	$4,570	$4,422	$5,672	$4,888
__Net Return	$884	$3,469	$2,766	$2,373
Southwestern Idaho:				
__Revenues	$11,439	$12,564	$15,538	$3,954
__Costs	$9,970	$9,220	$10,977	$3,017
__Net Return	$1,469	$3,344	$4,561	$3,125
Caribou:				
__Revenues	$859	$678	$814	$784
__Costs	$845	$651	$767	$754
__Net Return	$14	$27	$47	$29
Challis:				
__Revenues	$160	$119	$68	$116
__Costs	$399	$429	$350	$393
__Net Return	($239)	($310)	($282)	($277)
Salmon:				
__Revenues	$1,513	$2,060	$1,364	$1,646
__Costs	$1,924	$1,756	$1,610	$1,763
__Net Return	($411)	$304	($246)	($118)
Sawtooth:				
__Revenues	$194	$183	$125	$167
__Costs	$977	$594	$535	$702
__Net Return	($783)	($411)	($410)	($535)
Targhee:				
__Revenues	$2,535	$2,835	$3,153	$2,841
__Costs	$4,242	$4,045	$3,573	$3,953
__Net Return	($1,707)	($1,210)	($420)	($1,112)
Southeastern Idaho:				
__Revenues	$5,261	$5,875	$5,524	$1,666
__Costs	$8,387	$7,475	$6,835	$2,270
__Net Return	($3,126)	($1,600)	($1,311)	($2,012)
State of Idaho:				
__Revenues	$49,709	$59,964	$67,450	$17,712
__Costs	$42,545	$44,830	$50,891	$13,827
__Net Return	$7,164	$15,134	$16,559	$12,952